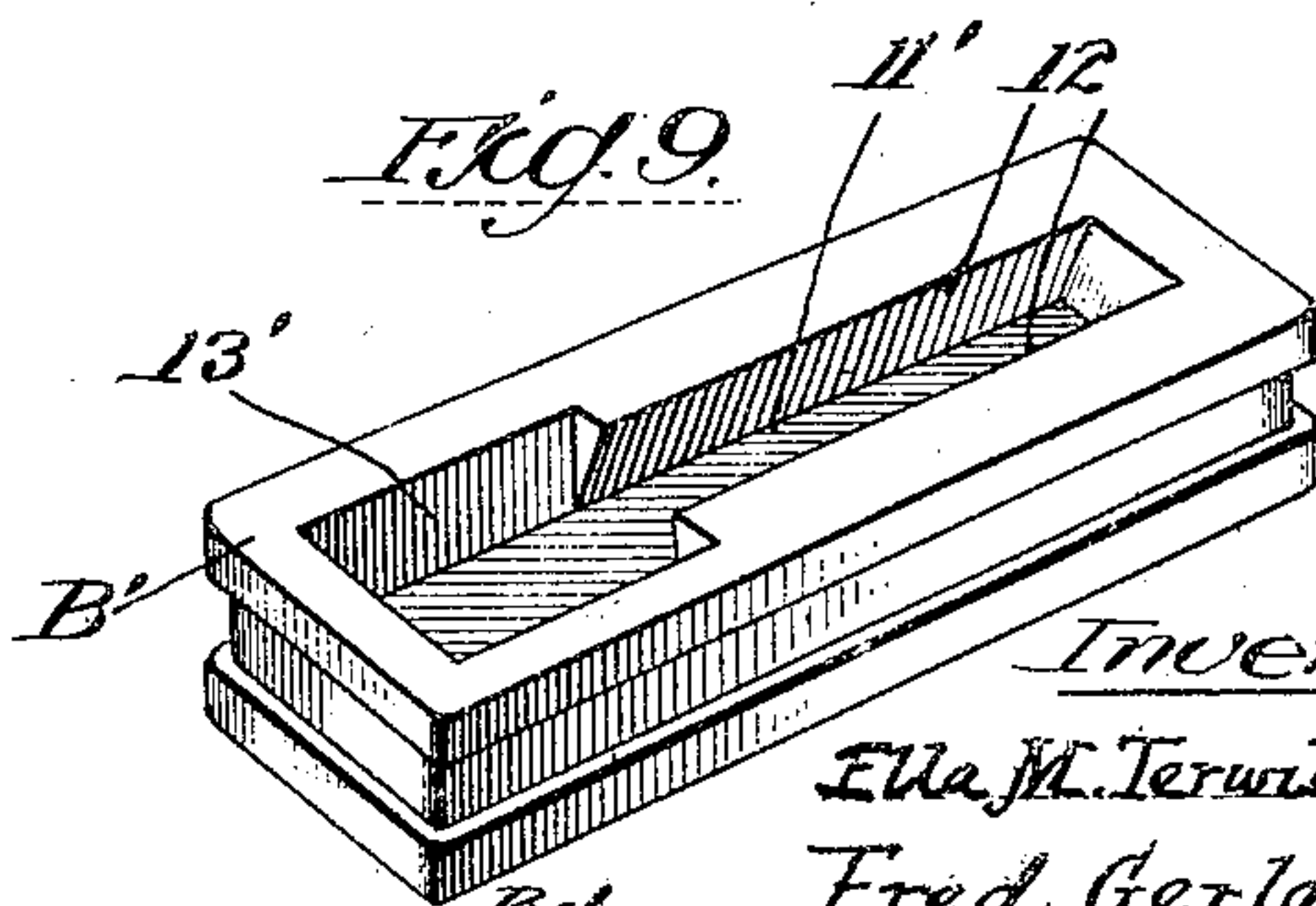
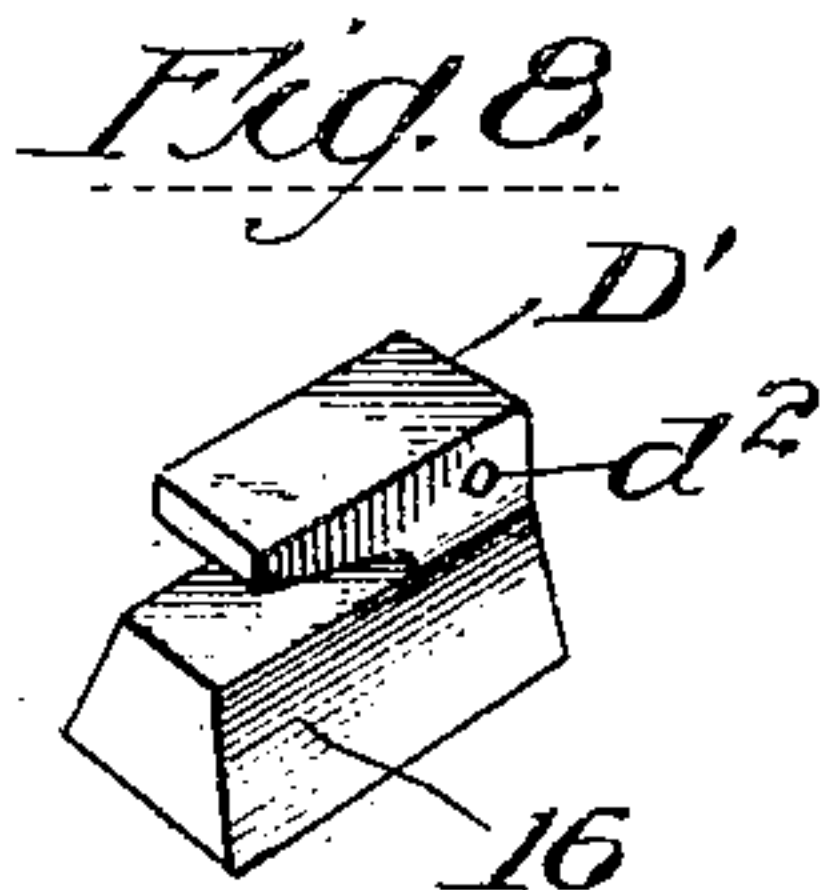
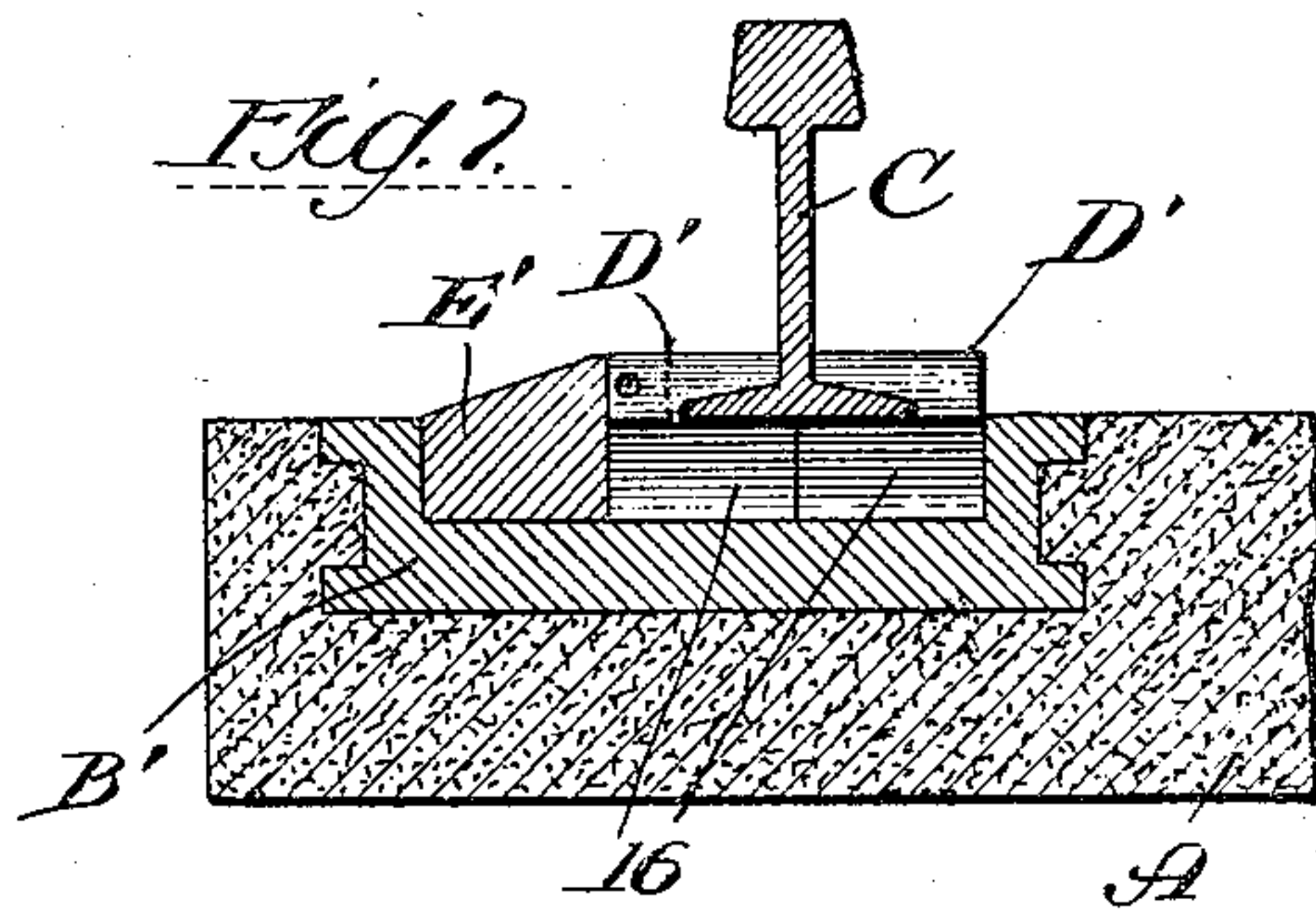
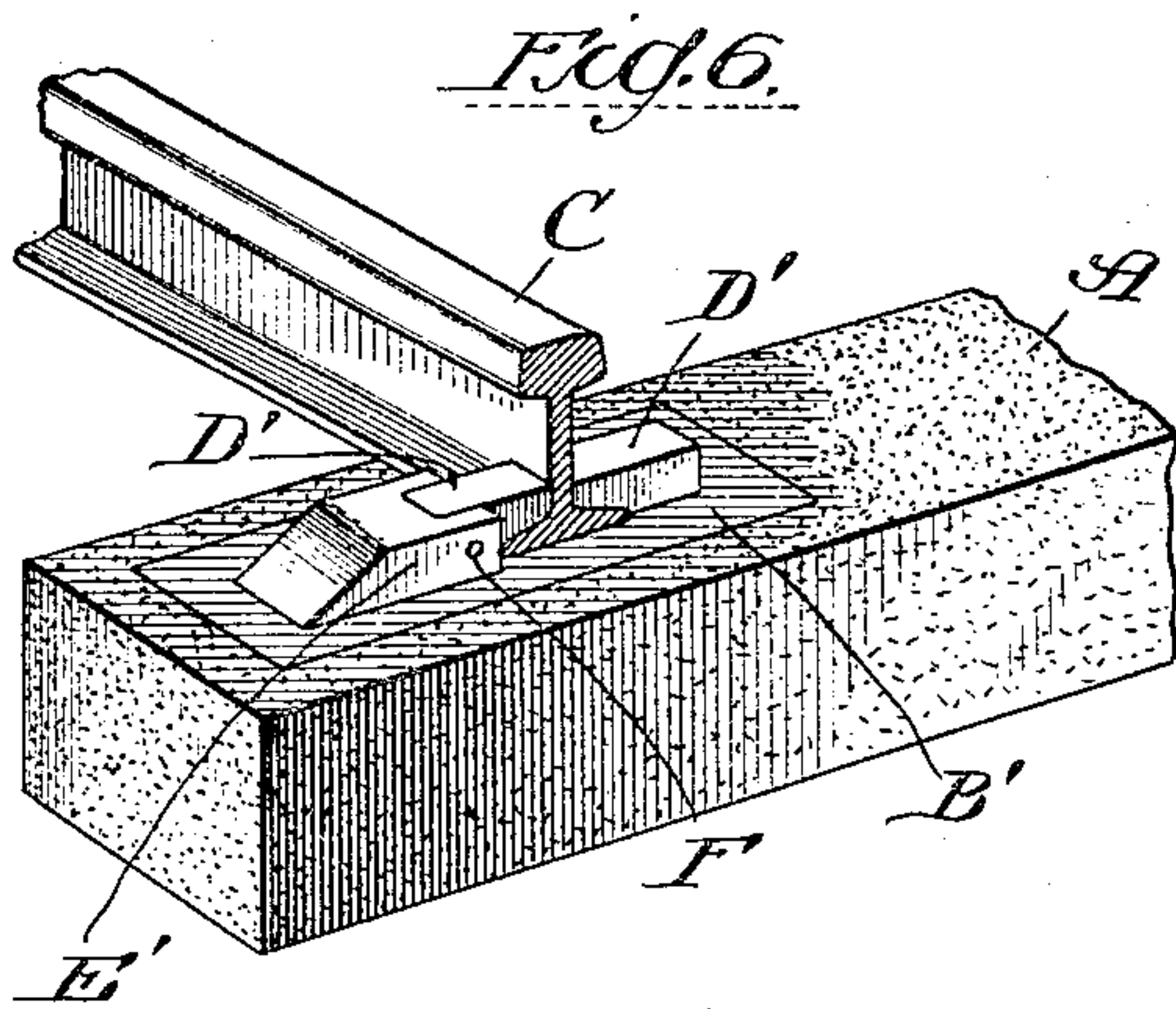
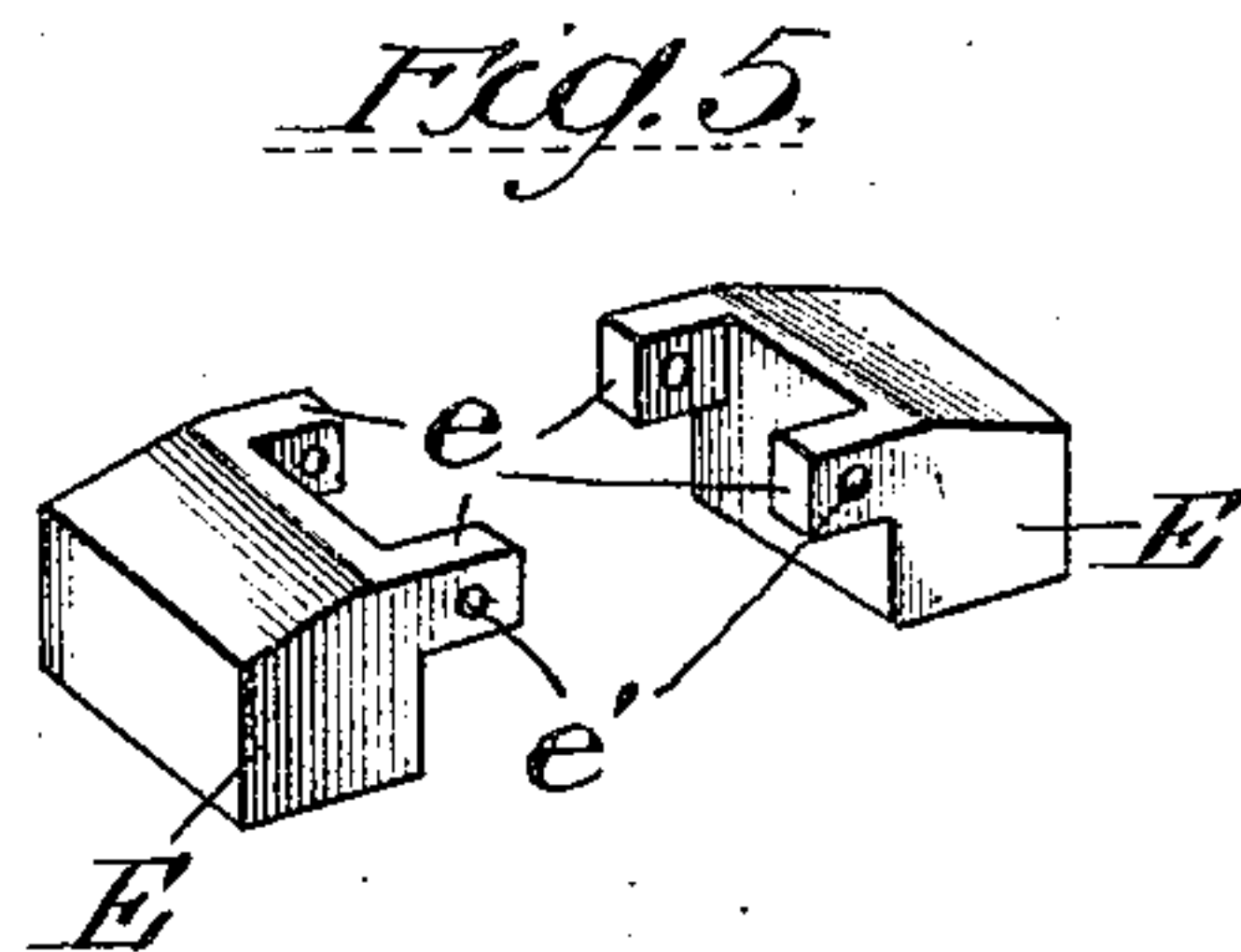
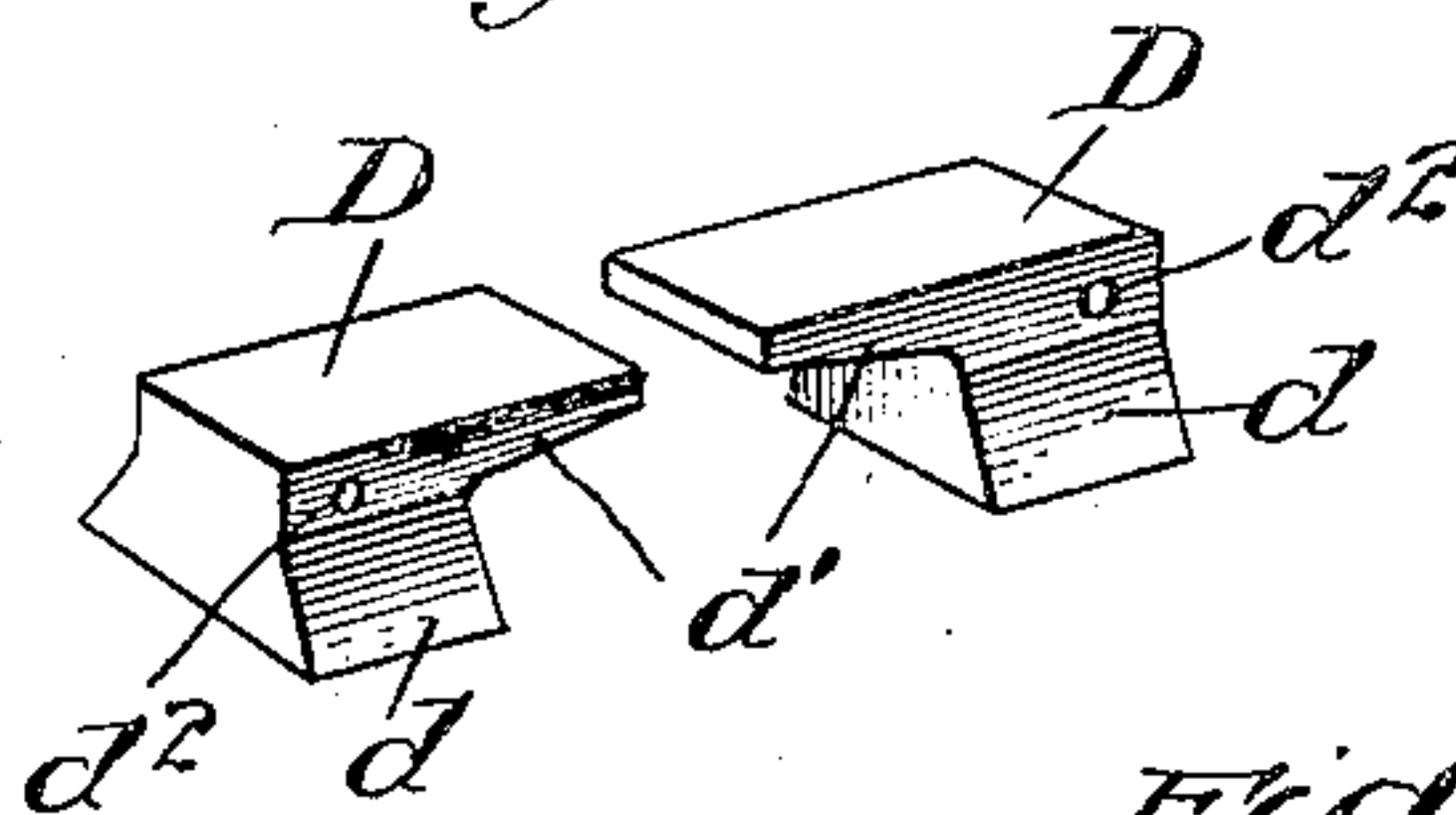
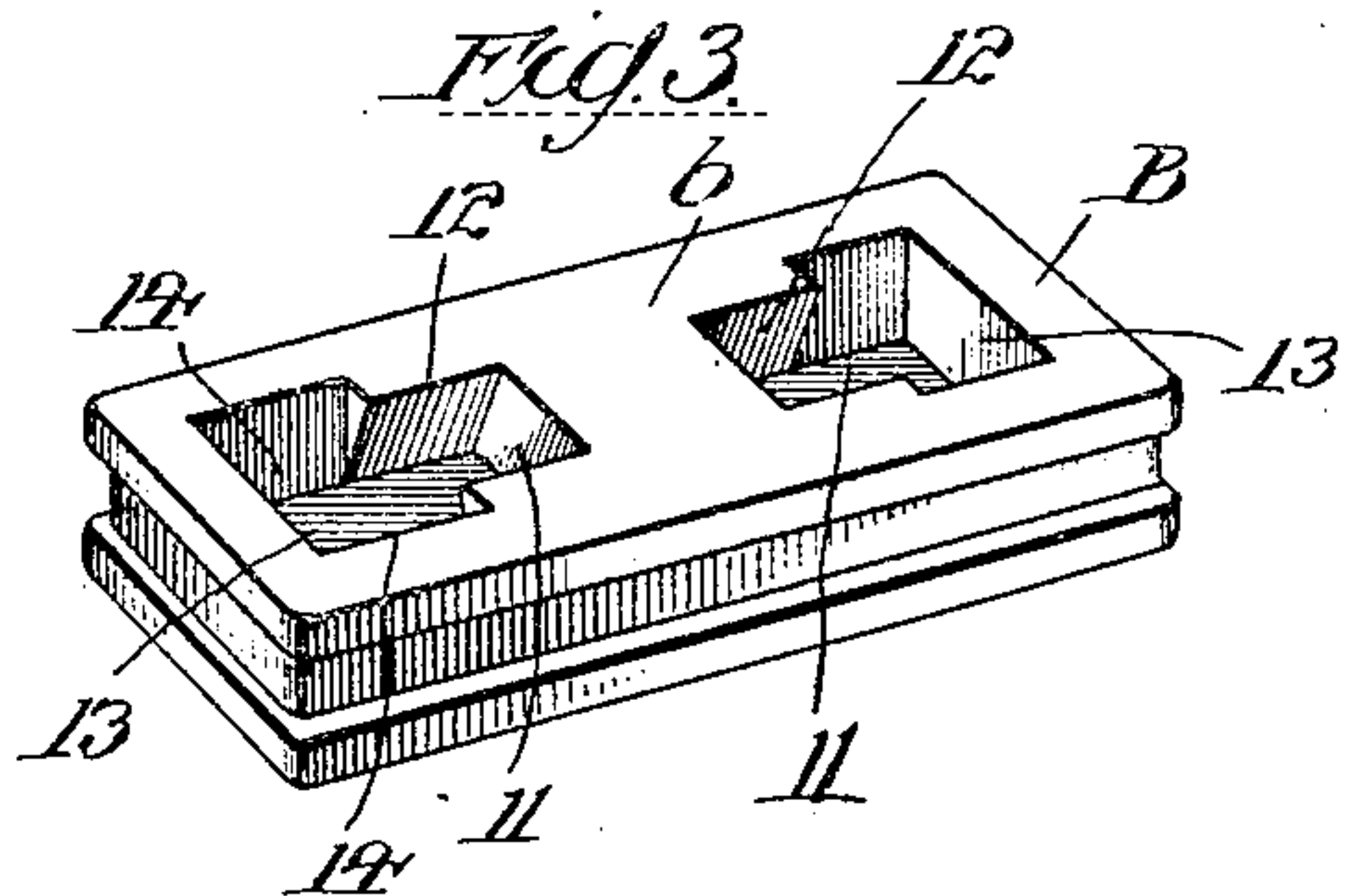
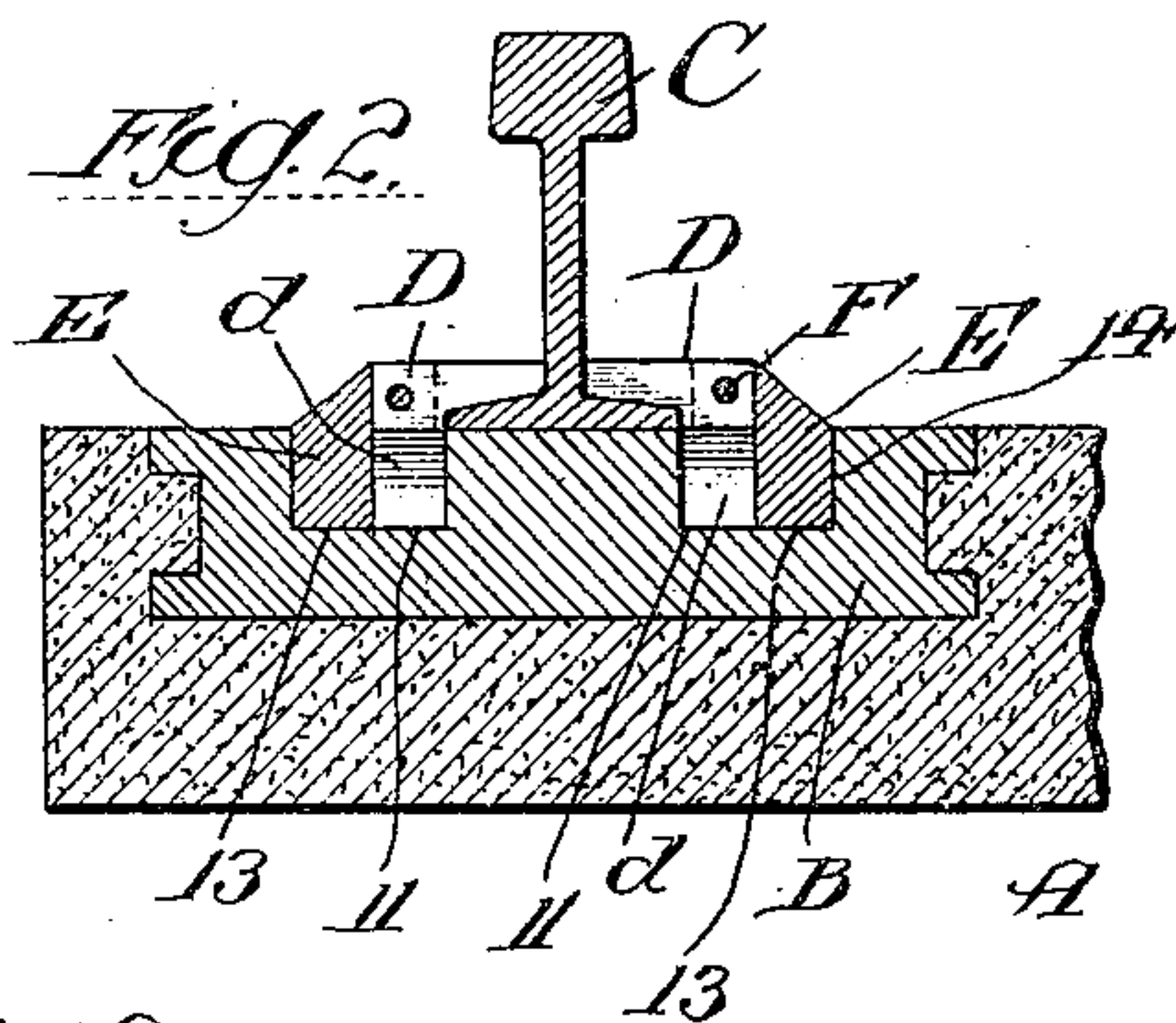
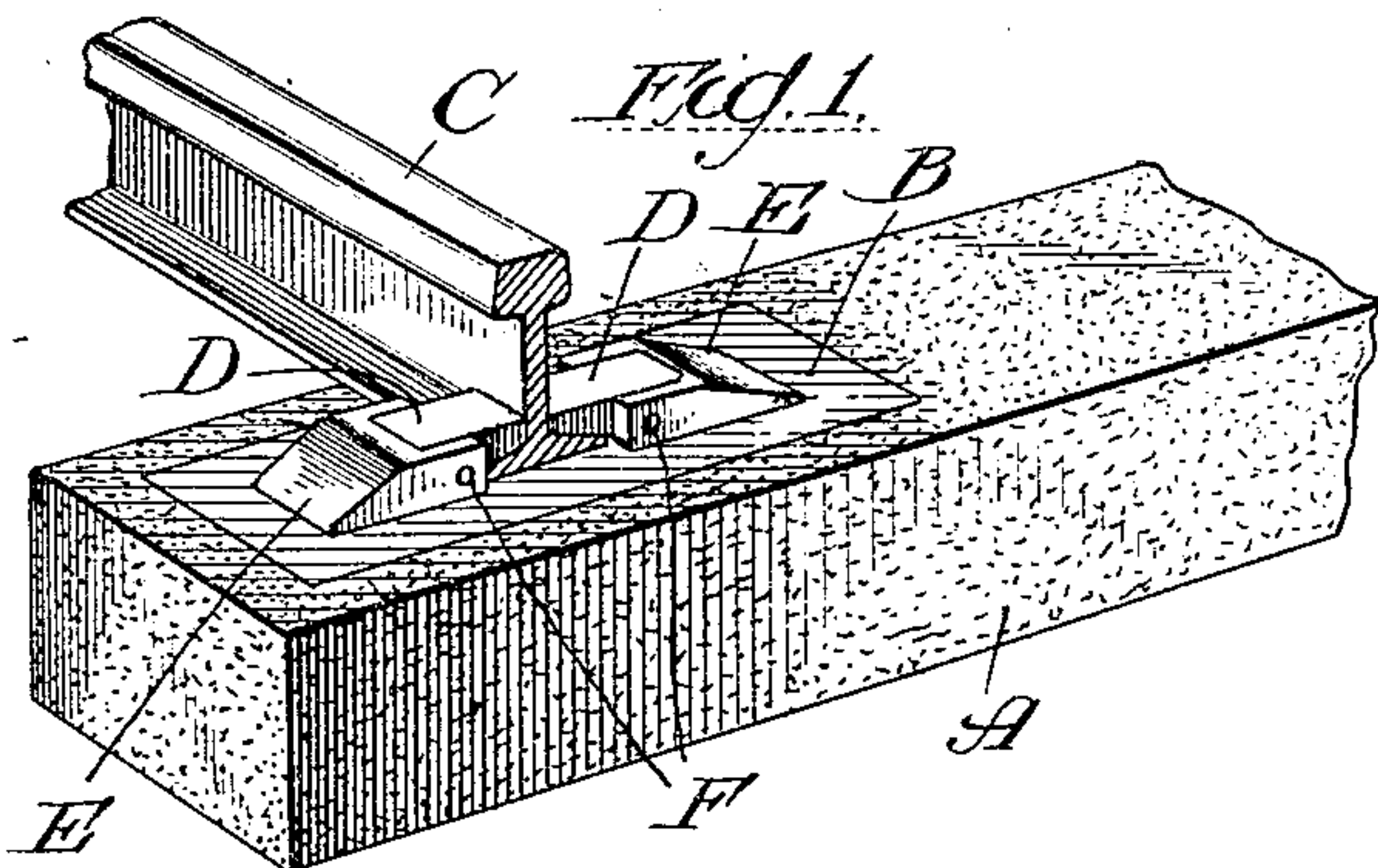


No. 801,278.

PATENTED OCT. 10, 1905.

E. M. TERWILLEGER.
RAIL CLAMP AND TIE.
APPLICATION FILED NOV. 19, 1904.



Witnesses:

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ELLA M. TERWILLEGER, OF CHICAGO, ILLINOIS.

RAIL-CLAMP AND TIE.

No. 801,278.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed November 19, 1904. Serial No. 233,415.

To all whom it may concern:

Be it known that I, ELLA M. TERWILLEGER, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Clamps and Ties, of which the following is a full, clear, and exact description.

The invention relates to improvements in rail-supports or devices for securing a rail to a railway-tie.

The object of the invention is to provide an improved construction for devices of this character; and the invention consists in the several novel features hereinafter set forth, and more particularly defined by claims at the conclusion hereof.

In the drawings, Figure 1 is a perspective showing a rail support and clamp embodying the preferred form of the invention. Fig. 2 is a longitudinal section taken centrally through the tie. Fig. 3 is a perspective of the tie-block. Fig. 4 is a perspective of the clamp members. Fig. 5 is a perspective of the key-blocks. Fig. 6 is a perspective showing a modified form of the invention. Fig. 7 is a longitudinal section of the same. Fig. 8 is a perspective of one of the clamp members of the same. Fig. 9 is a perspective of the tie-block for the same.

A denotes a tie formed of a concrete body having embedded therein a tie-block B, in which the members of the rail-clamp are held. The upper face of the tie-block is formed to support the rail C and has a central portion *b*, adapted to form a solid wall substantially the same width as the base of the rail and whereon the rail-base will rest. At each side of wall *b* is formed a pocket or socket 11, having inclined sides or walls 12, adapted to interlock with correspondingly-shaped sides of the clamp members, and an enlarged socket portion 13, formed to admit a clamp member so the member can be shifted laterally into interlocked relation with the socket 11. Socket portion 13 has straight walls 14, which admit the widest portion of a clamp member. While the tie is shown as being formed of a metallic block and a concrete body, it will be understood that, if desired, the entire body may be formed of metal with the sockets and supporting-wall for the tie.

The clamp comprises two members D D, each formed with a lower portion having inclined sides *d*, which are adapted to engage and interlock with inclined socket-walls 12, and an upper portion having a projecting

tongue *d'*, adapted to overlies the base-flange of the rail and to snugly and securely hold the rail against wall *b* of the tie-block. The clamp members can be placed into position to secure the rail when the rail has been placed in position on the tie-block by dropping the clamp members into sockets 13 and then moving the members laterally to bring the inclined side *d* to interlock with the correspondingly-shaped side 12 of socket 11. In such position the clamp members will be secured against upward movement and will secure the rail in position upon the tie. A key-block E fits into each of the sockets 13 and is adapted to be inserted vertically into said socket and when in such position to hold the clamp against lateral movement in the socket and in interlocked relation with the tie. Each key-block is provided with lugs *e*, having holes *e'* therein to receive a rivet or bolt F, which is adapted to pass through said lugs, and each clamp member has a hole *d''* extending there-through for the bolt. The bolts secure the key-blocks to the clamp members and against removal from the block. In practice one end of the bolt is usually upset to well secure the bolt against withdrawal.

The improved rail-clamp and tie thus constructed permit the rail to be placed in position before the clamp is applied to secure the rail and in such manner that shift of the rail is not necessary in securing the rail to the tie. Another advantage is that a solid support is formed beneath that portion of the rail which overlies the tie. Furthermore, the manner of securing the key-blocks against withdrawal is a simple, effective, and advantageous one, because the clamp members being interlocked with the tie secure the key-block against withdrawal.

In Figs. 6, 7, 8, and 9 is illustrated a modified form of the invention in which each of the clamp members D' is inserted through an opening 13' at one end of a socket 11', formed in a tie-block B'. Each of the clamp members is provided with an extension or body 16, adapted to lie beneath and support the rail. Socket 13' is elongated to admit the body of one of the clamp members. It will be understood that key-block E' is formed to fit into socket 13' and is provided with lugs *e*, which are secured to one of the clamp members against withdrawal by a bolt F. In this construction but a single key-block is necessary, and the clamp members are formed with a support and abutment for the base of the rail.

Having thus described the invention, what I claim as new, and desire to obtain by Letters Patent, is—

1. The combination of a tie provided with
5 a socket, a clamp, said socket and clamp having inclined engaging sides whereby the clamp is secured, said socket having a portion admitting the clamp so that it can be placed into interlocked position, a key-block fitting in
10 said portion of the socket, and means for securing the key-block to the clamp to retain the key-block against withdrawal.

2. The combination of a tie provided with
15 a socket, a clamp, said socket and clamp having interlocking portions whereby the clamp is secured, said socket having a portion admitting the clamp so that it can be placed into interlocked position, a key-block fitting in said portion of the socket, and a bolt extending
20 through the key-block and the clamp for securing said parts together to retain the block against withdrawal.

3. The combination of a tie provided with
25 a socket, a clamp, said socket and clamp having interlocking portions whereby the clamp is secured, said socket having a portion admitting the clamp so that it can be placed into interlocked position, a key-block fitting in said portion of the socket and having a lug at
30 each side of the clamp, and a bolt extending through said lugs and clamp for securing the block to the clamp.

4. The combination of a tie provided with
35 a socket, a clamp, said socket and clamp having inclined engaging sides whereby the clamp is secured, said socket having a portion admitting the clamp so that it can be placed into interlocked position, a key-block fitting in said portion of the socket and having straight
40 walls so that it can be moved into or out of the socket vertically, and means for securing the key-block against withdrawal.

5. The combination of a tie provided with
45 a socket, a clamp, said socket and clamp having inclined engaging sides whereby the clamp is secured, said socket having a portion admitting the clamp so that it can be placed into interlocked position, a key-block fitting in said portion of the socket and having straight
50 walls so that it can be moved into or out of the socket vertically, and a bolt for securing the key-block to the clamp.

6. The combination of a tie, a clamp comprising members each of which is adapted to
55 engage and secure one side of the base of a rail, said members and said tie being provided with inclined engaging sides, said tie being provided with a socket to admit each of the clamp members so that they can be placed into
60 interlocked position, a key-block for each of

the clamp members, and means for securing the key-blocks against withdrawal.

7. The combination of a tie, a clamp comprising members each of which is adapted to engage and secure one side of the base of a
65 rail, said members and said tie being provided with inclined engaging sides, said tie being provided with a socket to admit each of the clamp members so that they can be placed into interlocking position, a key-block for each of
70 the clamp members, and means for securing each of the key-blocks to one of the clamp members to retain the blocks against withdrawal.

8. The combination of a tie, a clamp comprising members each of which is adapted to
75 engage and secure one side of the base of a rail, said members and said tie being provided with interlocking portions, said tie being provided with a socket to admit each of the clamp
80 members so that they can be placed into interlocked position, a key-block for each of the clamp members, and bolts each extending through one of the blocks and one of the
85 clamp members to secure the key-blocks against withdrawal.

9. The combination of a tie, a clamp comprising two members, said tie and members having interlocking portions, a supporting
90 abutment for that portion of the rail held by the clamp members and extending entirely across the base of the rail, and a key-block for securing the clamp members in interlocked position.

10. The combination of a tie, a clamp comprising two members, said tie and members
95 having inclined engaging sides, said tie being provided with a wall on which the rail is held extending entirely across the width of the base of the rail, and a key-block for holding
100 the clamp members in interlocked position.

11. The combination of a railway-tie having a concrete body, an apertured metallic
105 block embedded therein, a clamp for securing the rail to said block, said clamp and block having interlocking portions, and means for securing the clamp in interlocked relation with said block.

12. The combination of a railway-tie having a concrete body a metallic block embedded
110 therein, a pair of clamp members, said clamp members and said block having interlocking portions a key-block for holding the clamp members in interlocked position, and
115 means for securing the key-block to one of said clamp members.

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