

No. 815,374.

PATENTED MAR. 20, 1906.

E. PIERREPONT.  
TOOTH MOLD.

APPLICATION FILED NOV. 10, 1904. RENEWED JAN. 23, 1906.

2 SHEETS—SHEET 1.

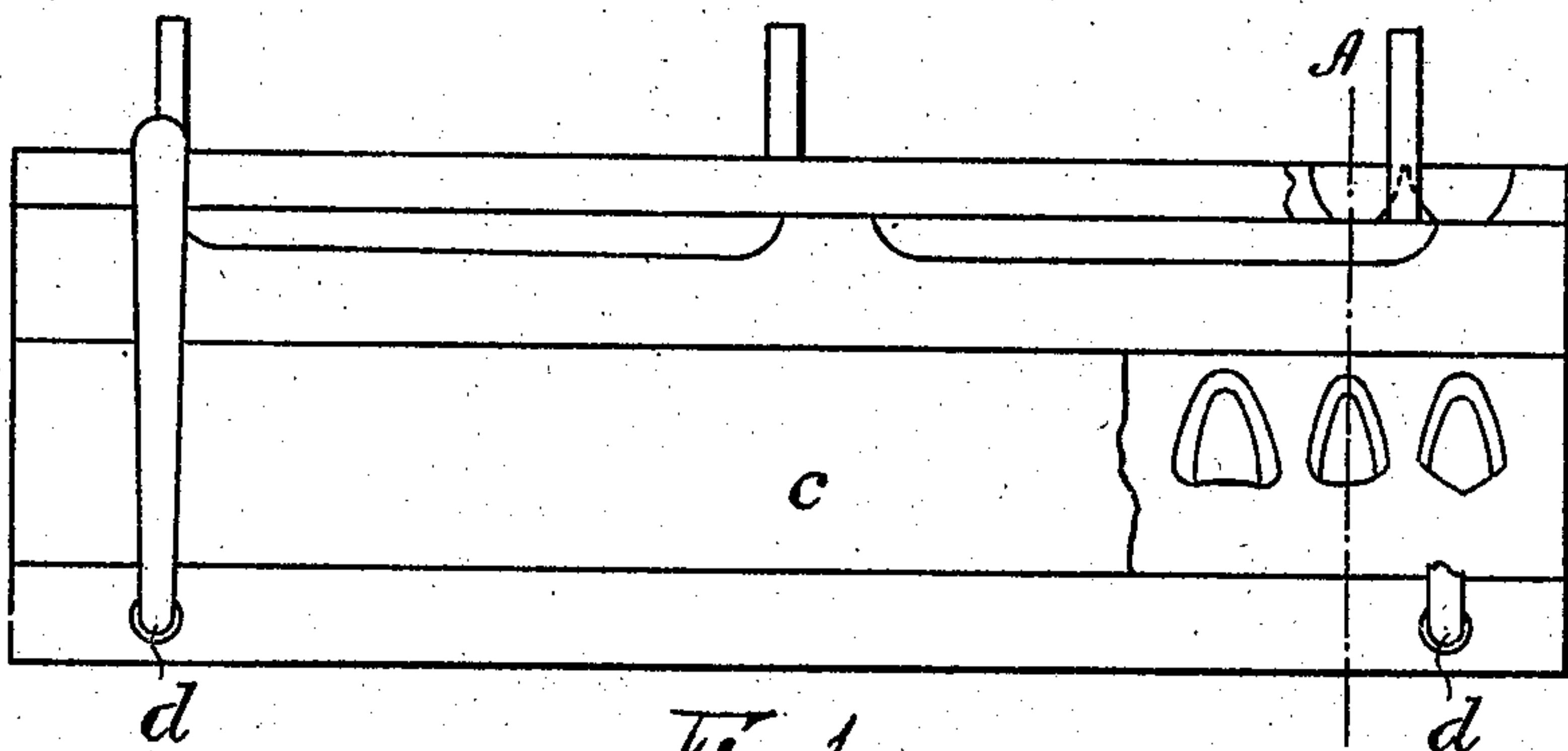


Fig. 1.

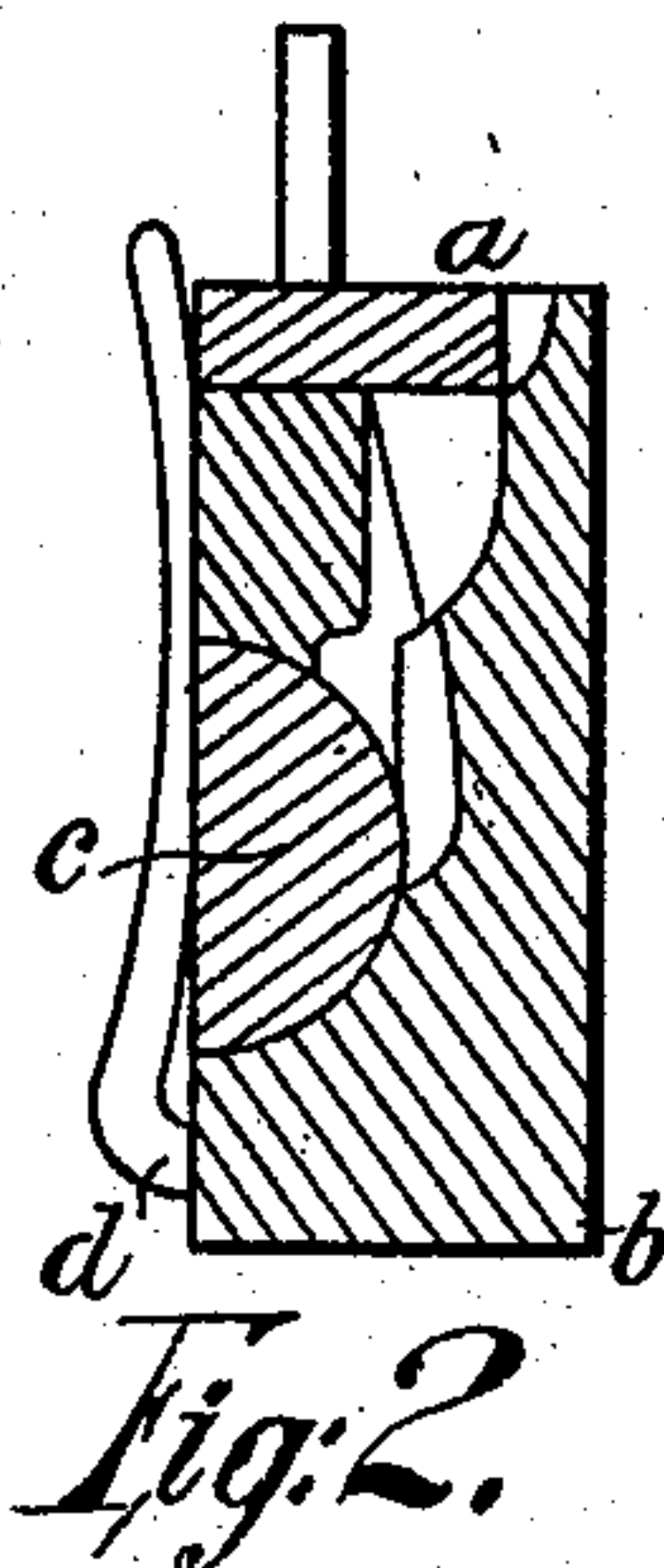


Fig. 2.

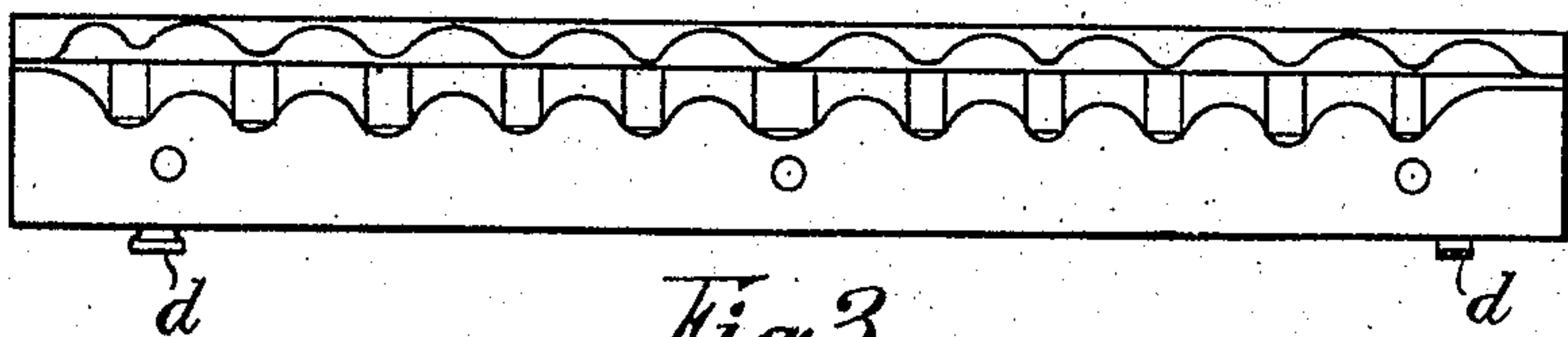


Fig. 3.

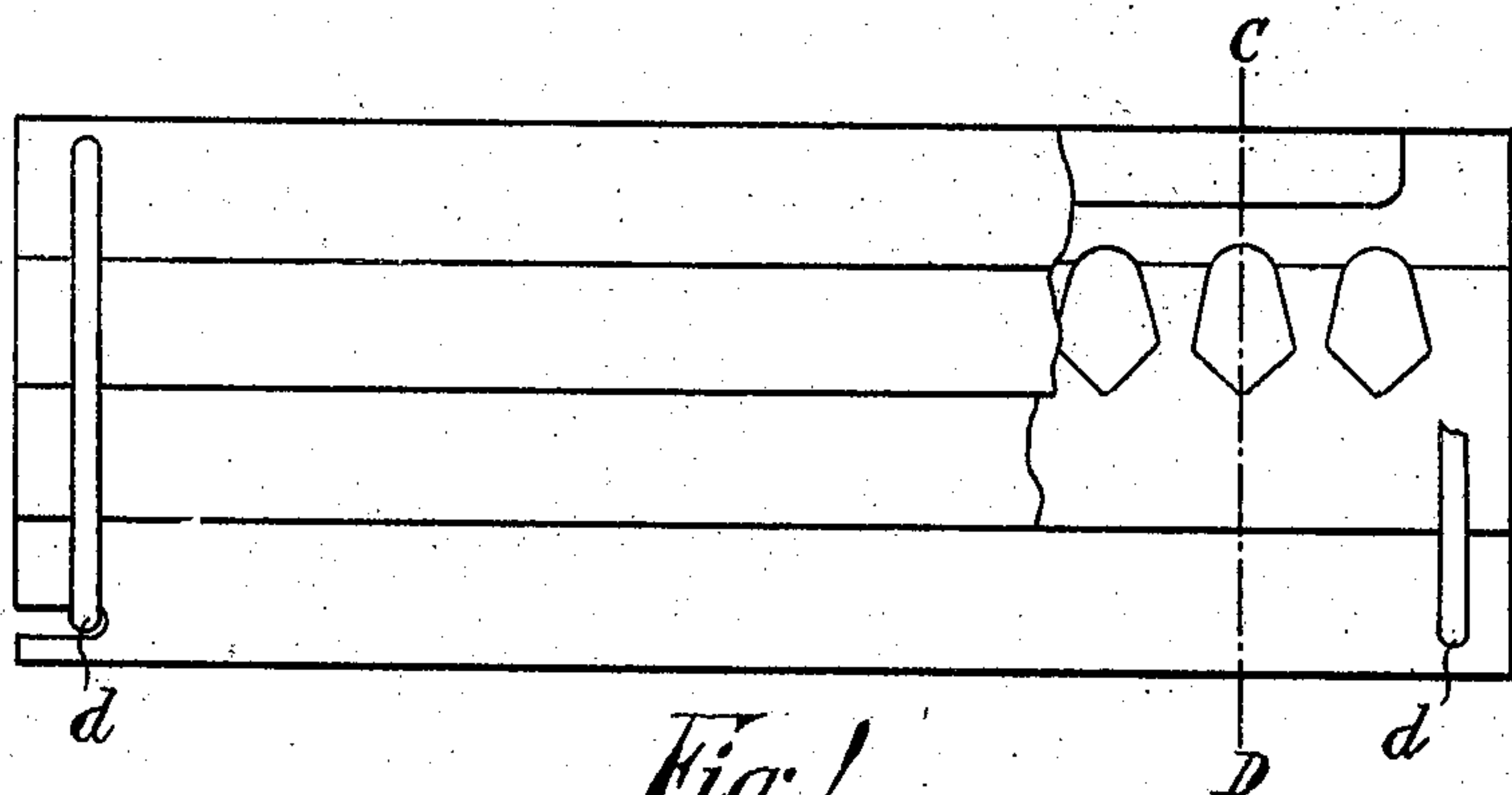


Fig. 4.

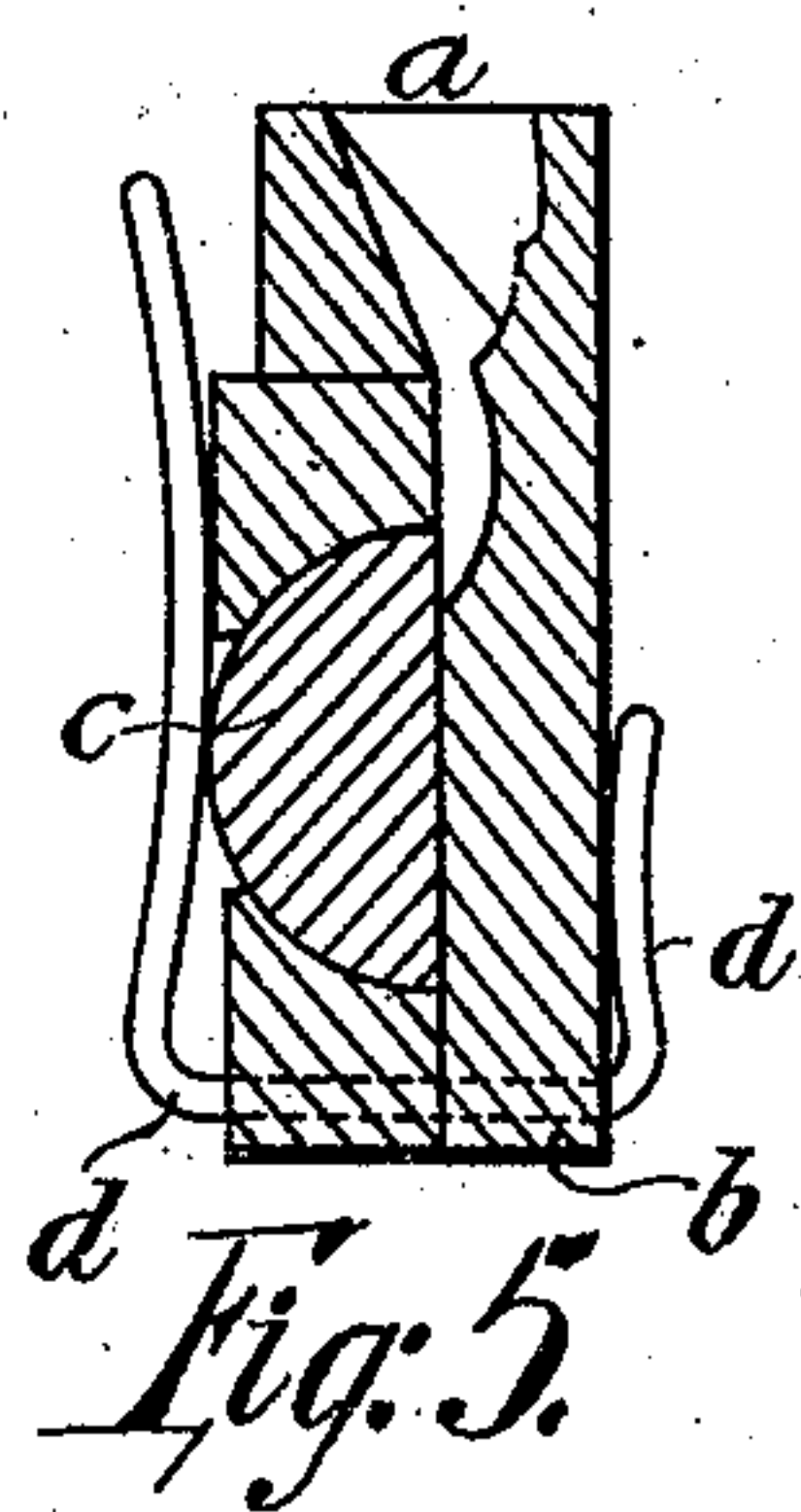


Fig. 5.

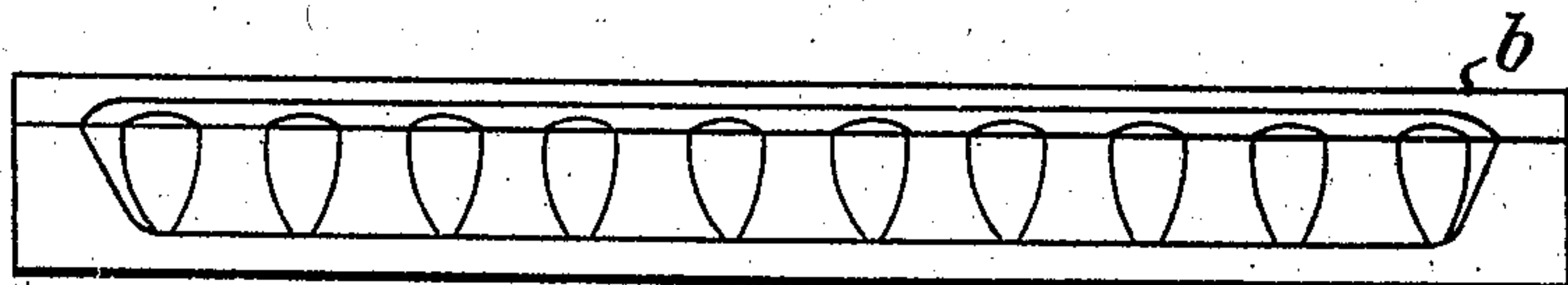


Fig. 6.

Witnesses

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Attorney

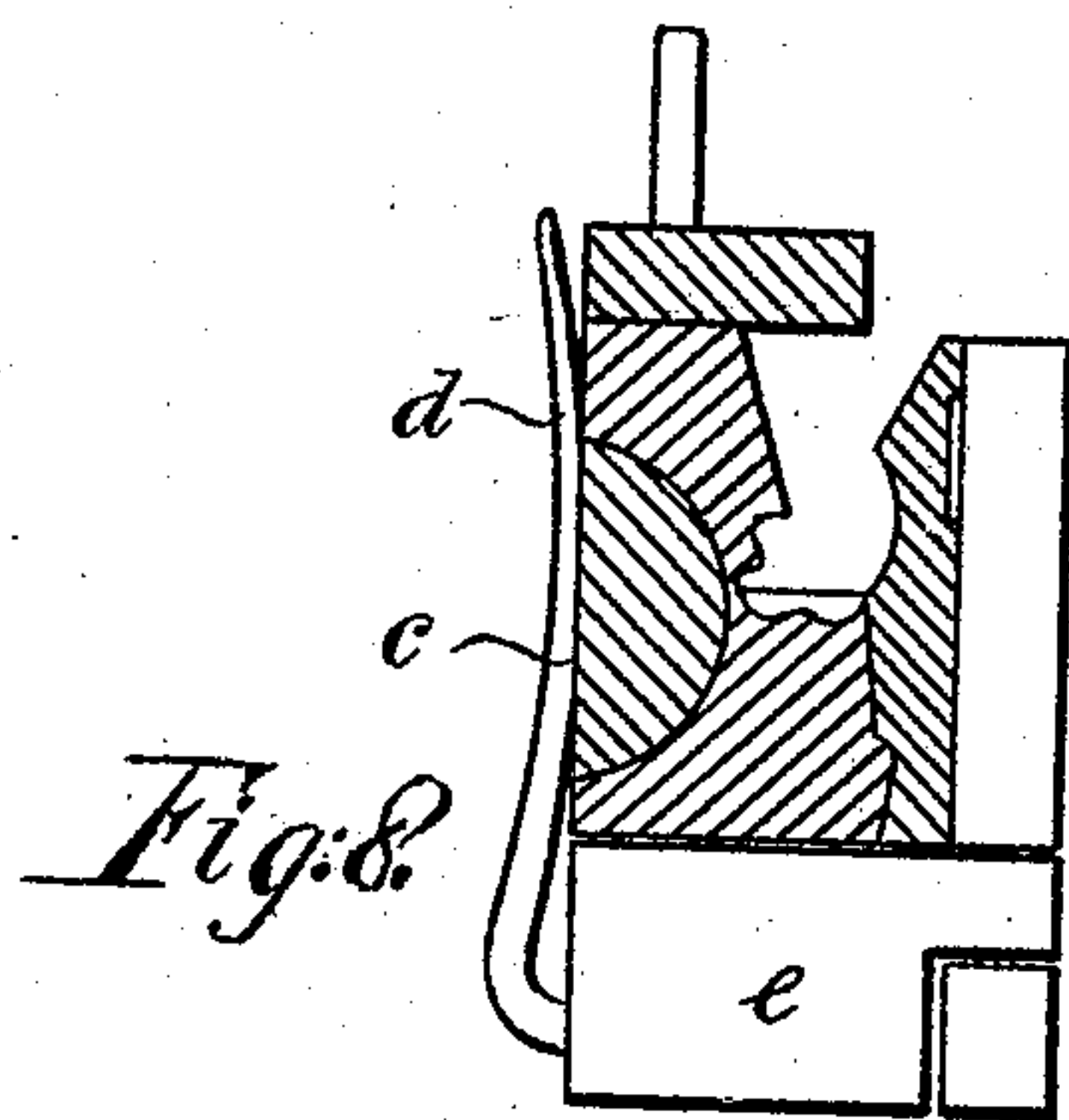
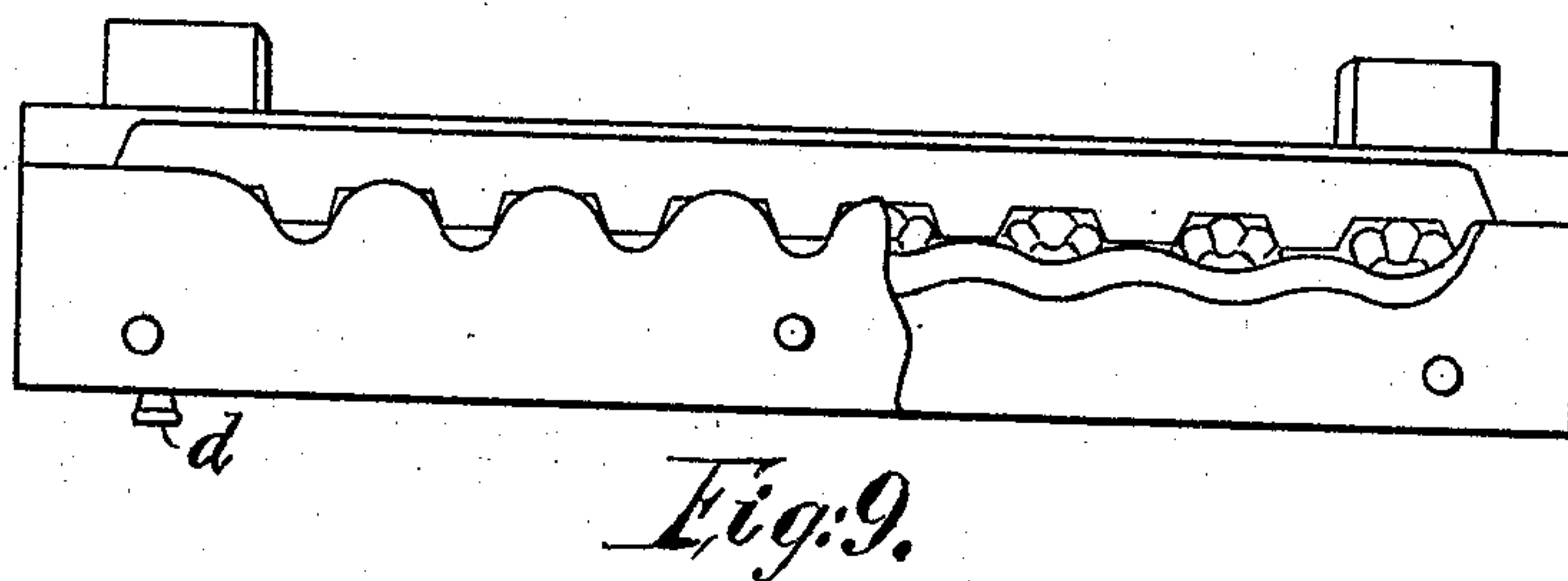
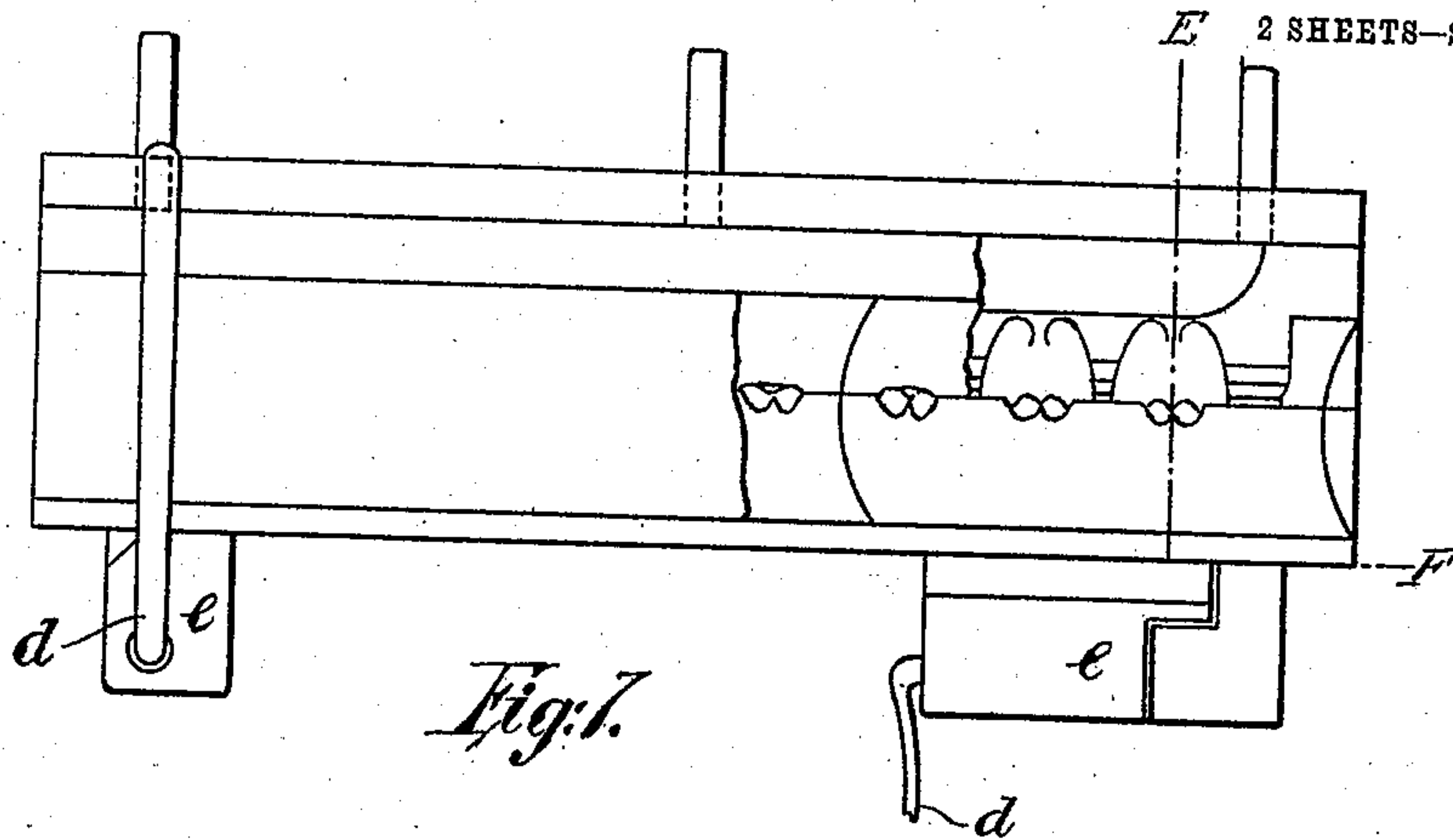
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2 SHEETS—SHEET 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

EVELYN PIERREPONT, OF LONDON, ENGLAND.

## TOOTH-MOLD.

No. 815,374.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed November 10, 1904. Renewed January 23, 1906. Serial No. 297,449.

*To all whom it may concern:*

Be it known that I, EVELYN PIERREPONT, doctor of dental surgery, a subject of the King of Great Britain, residing at Bank Chambers, Cockspur street, London, England, have invented a new and useful Improvement in Tooth-Molds, of which the following is a specification.

My invention relates to an improved mold for the molding of artificial teeth.

By this invention I have endeavored to obviate the imperfections of the molds hitherto ordinarily in use for the like purpose, the chief of which are, first, the formation of the mold of a multiplicity of parts, one of which parts is in plaster; secondly, the necessity for a large number of working pattern-teeth, and, thirdly, the prevention of leakage, whereby the color of the teeth may be affected, inasmuch as it is always necessary to mold one part of the tooth from material of a lighter color or shade to the remaining part, and any leakage from the mold disturbs the proper relation of the respective colors or shades.

In the construction of my mold as adapted for incisor or other teeth I form it with a face having a raised part or buttress of brass on it which may be fixed or removable, as occasion requires, at the part formerly covered by the frame with its plaster contents. I have the festoons or divisions between the teeth, which were in the former construction formed by the plaster in the frame, made in my construction in brass and fixed on that part of the gate which formerly came in contact with the edge of the plaster in the frame.

In my construction I divide the matrix or matrices into three parts instead of two, as before, and I have only the lingual surface of the teeth in contact with the absorbent material. Between the gate and the buttress or raised brass portion of the face I leave a space adapted to receive a detachable and perfectly independent "inset" of suitable porous or absorbent material. This inset is adapted to close up the lingual side of the matrix, and consequently fulfils all the purposes formerly attained by the back with its plaster contents. Furthermore, in my system it is not necessary to have any loose-working pattern-teeth whatever.

In order to fit my mold for use, it is only necessary to assemble the parts and place the detachable inset in position.

The inset may be of any convenient shape. In practice, however, I find that a semicylindrical rod or piece is the most generally applicable, inasmuch as its contour enables me to apply it without alteration to the construction of the various mineral teeth required. The inset may be of any absorbent material, or it may be a solid or hollow piece of a non-absorbent material covered with a layer of any suitable absorbent. It is a practical advantage in working that the absorption of moisture by this means is much quicker than by the means usually adopted for removing surplus moisture from the ordinary tooth-molds. The semicylindrical inset is applicable to the production of the various sorts of teeth. For instance, in the case of pin-teeth for vulcanite settings the curvature of the inset adapts it to fit or form the inner or lingual side of the shoulders or projecting parts of the teeth. In the case of a tooth-crown the inset is adapted likewise to form the curved lingual or inner side of the crown. By turning the semicylindrical inset with the flat side down it will form a flat surface suitable for making the lingual side of ordinary flat-back teeth. Finally, in the case of molars or bicuspid teeth for vulcanite or plate work the inset is preferably in contact in this case also with the lingual surfaces of the teeth. Finally, there is considerable practical advantage in the fewness of parts required for producing very various patterns of teeth. By my system a mold having certain interchangeable parts can produce at will incisor or canine teeth adapted for vulcanite pin-teeth or diatoric teeth or tooth-crowns, and in like manner with suitable molds I can produce molars or biscopids, in all cases without the use of working pattern-teeth.

In order more particularly to set forth my invention, I have illustrated it in the accompanying drawings.

In the drawings, Figure 1 shows a front elevation, partly broken away, of a mold arranged for making front teeth, (crowns.) Fig. 2 is a section of Fig. 1 on the line A B. Fig. 3 is a plan view of Fig. 1. Fig. 4 is a front elevation, partly broken away, of a mold for forming pin-teeth, (flat backs;) Fig. 5, a section of Fig. 4 on the line C D; Fig. 6, a plan view of mold, illustrated in Fig. 4. Fig. 7 shows a mold arranged for making bicuspid or molars; Fig. 8, a section of Fig. 7 on the line E F; Fig. 9, a plan view, partly



broken away, of Fig. 7. The principle of these molds is throughout the same, the arrangement being only varied in detail to accommodate them to the different patterns and shapes of teeth required.

In the drawings the gate is indicated by *a*, the matrix by *b*, and the inset by *c*.

The letter *d* indicates the fastening or clamping device. This may be simply a pivoted clamp, as shown in Figs. 1, 2, and 3, but for certain molds in which molars or bicuspid or other teeth are to be formed, such as illustrated in Figs. 4, 5, 6, 7, 8, and 9, it is necessary that that part of the mold described as the "buttress" should be capable of being withdrawn to enable the tooth to be readily removed from the mold. For this purpose I attach to the mold two swinging blocks *e*, on which the clips or clamps are pivoted and which can be turned down, so as to enable the back of the mold to be withdrawn and the teeth to be readily taken out.

The inset *c* may be of any suitable absorbent or of ebonite, brass, wood, or other substance covered with any absorbent or other convenient porous material.

One great advantage of my mold as above illustrated is that by having various interchangeable parts adapted to the different kinds of teeth the face of the mold remains the same and can be used for molding the various kinds of teeth required.

What I claim is—

1. In a mold for making artificial teeth a detachable inset having the inner surface shaped to the contour of the lingual surfaces of said teeth, the other portions of said mold having the remaining contours of said teeth entirely formed in them, all said parts rigidly and detachably connected.

2. In a mold for making artificial teeth, a gate-piece integral with a portion of the teeth-matrices, festoons between said matrices and integral with the gate-piece, a face-piece integral with the front portions of the said teeth-matrices, a raised buttress on said face-piece adapted to act as the frame, a detachable absorbent inset adjacent to and forming the lingual side of the said teeth-matrices and

means for retaining the separate pieces in the operative position.

3. In a mold for making artificial teeth, a metallic gate-piece having a series of depressions, said depressions forming portions of teeth-matrices, raised portions (festoons) integral with said gate-piece and separating said matrices, a gate-piece integral with a portion of the teeth-matrices, festoons between said matrices and integral with the gate-piece, a face-piece integral with the front portions of the said teeth-matrices, a raised buttress on said face-piece adapted to act as the frame, a detachable absorbent inset adjacent to and forming the lingual side of the said teeth-matrices, perforated swinging blocks pivotally attached to the said face-piece and clips on said block adapted to hold the parts of the mold together.

4. In a dental mold for making artificial molars and bicuspid, a metallic gate-piece having a series of depressions forming the rear part of the teeth-matrices, festoons integral with said gate-piece and separating said matrices, a face-piece integral with the front portions of the teeth-matrices, festoons between said matrices integral with the face-piece, a raised buttress on said face-piece adapted to act as the frame, the absorbent inset *c* adjacent to and forming part of the lingual side of said teeth-matrices, a detachable buttress adjustable between the face-piece and the inset, tooth-crown matrices on said buttress, and means for retaining the separate pieces in the operative position.

5. In a mold for making artificial teeth, the metal gate-piece *a* adapted to form a portion of the teeth-matrices, the face-piece *b* adapted to form another portion of the teeth-matrices, the absorbent inset *c* and the swinging buttresses *e* on said face-piece provided with clips *d*.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EVELYN PIERREPONT.

Witnesses:

LEONARD E. HAYNES,  
JOHN A. JORDAN.