

No. 619,921.

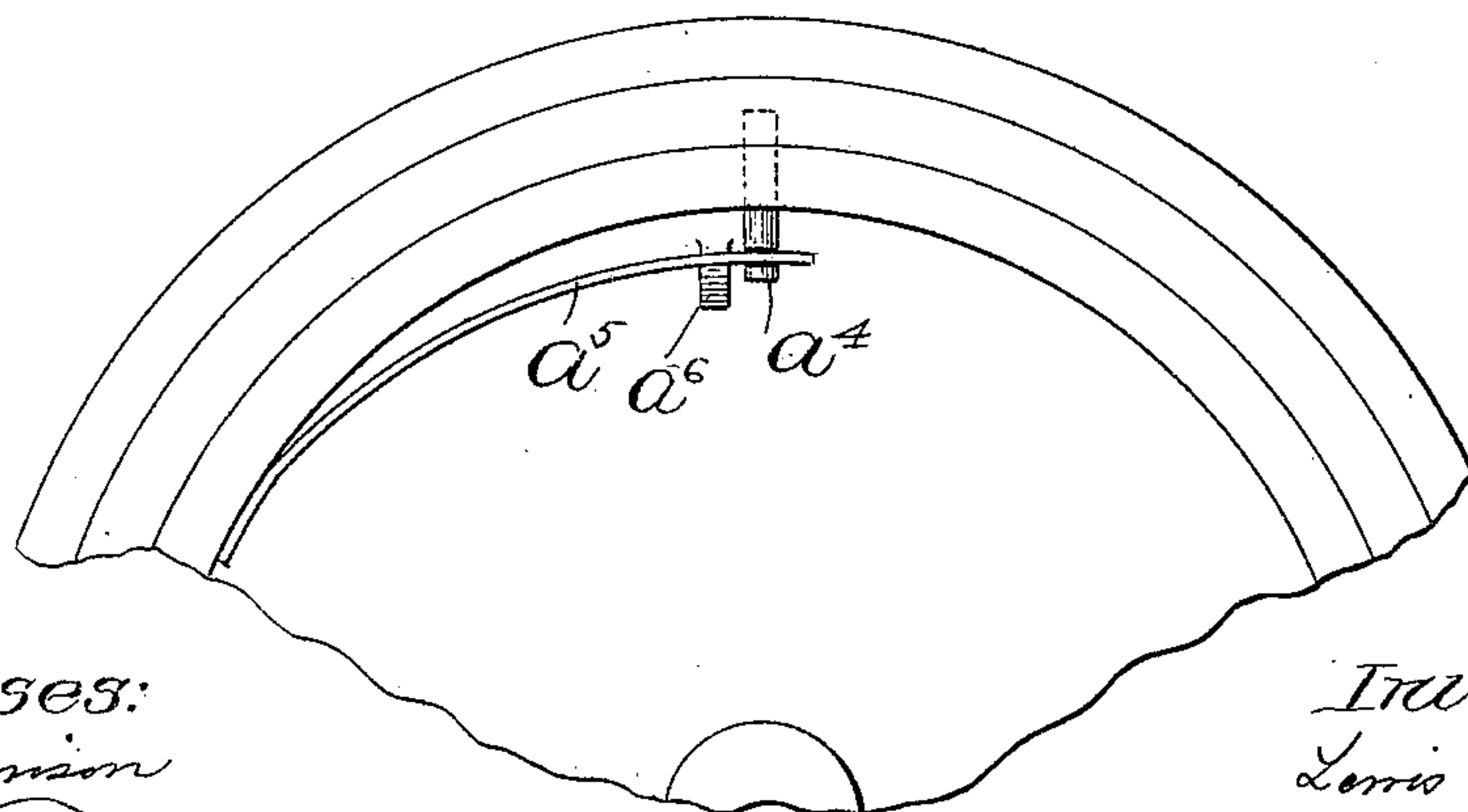
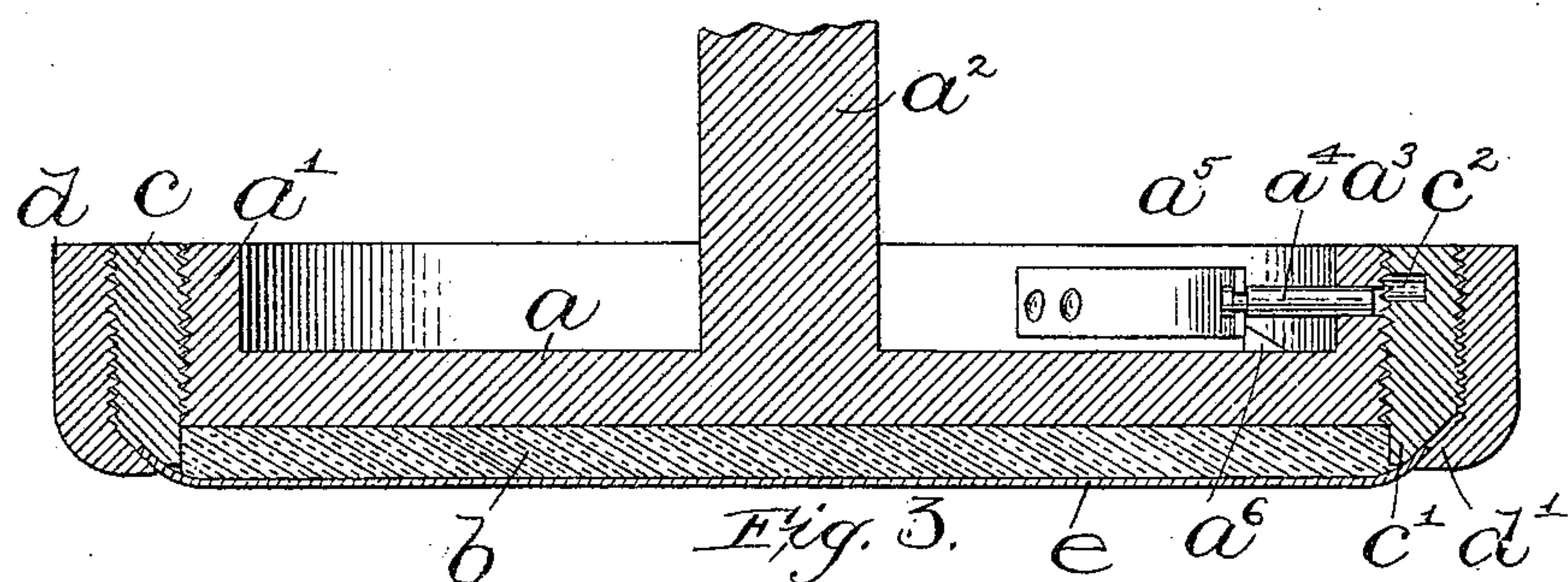
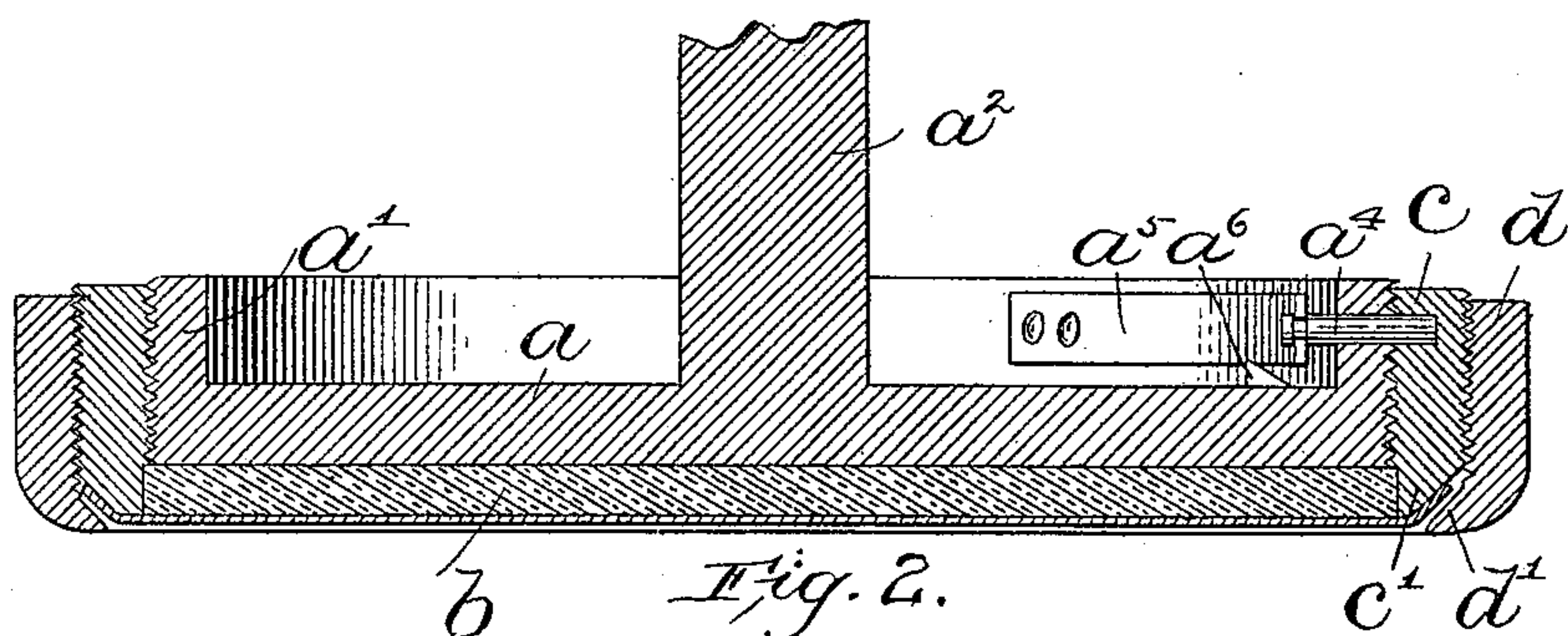
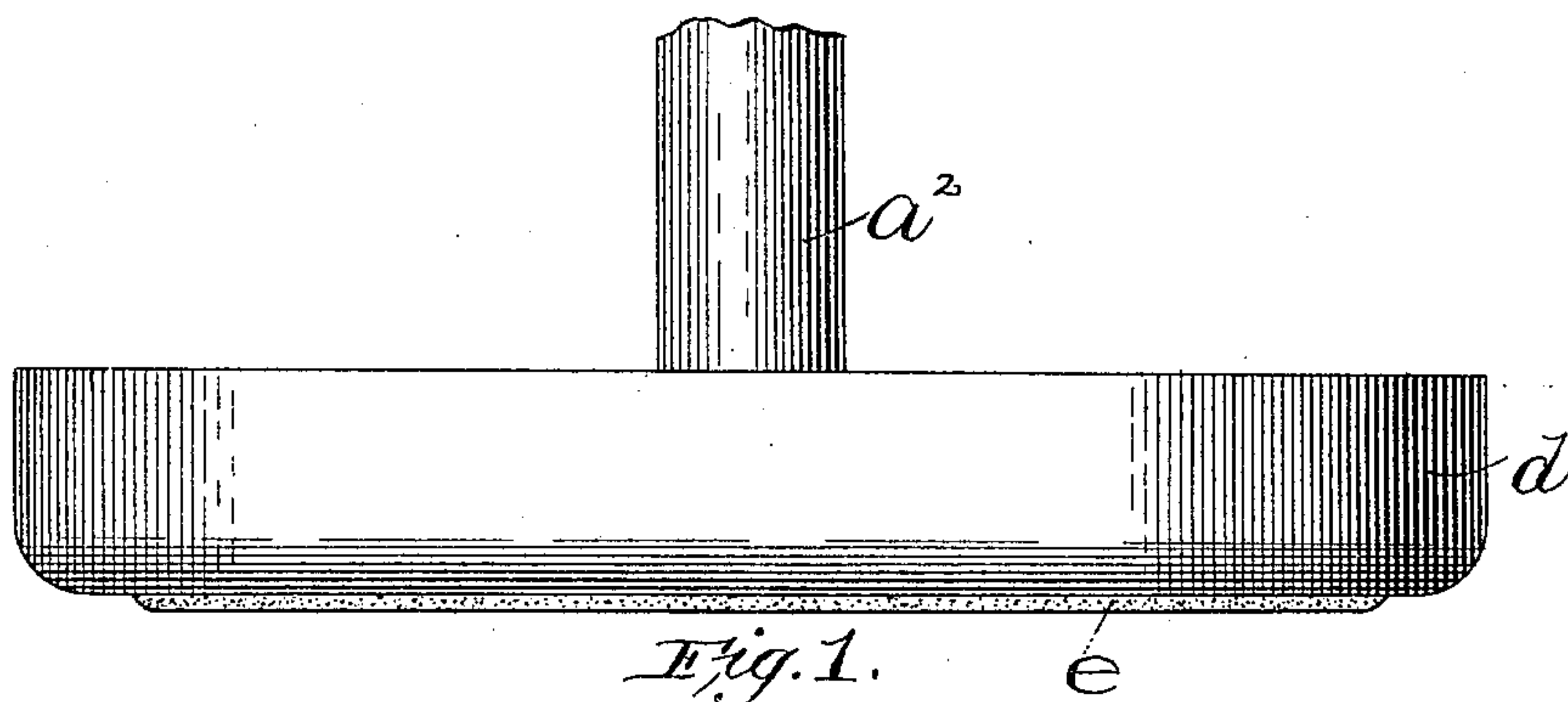
Patented Feb. 21, 1899.

L. T. ADAMS.

TOOL FOR GRINDING OR POLISHING HEELS.

(Application filed June 1, 1898.)

(No Model.)



Witnesses:

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# UNITED STATES PATENT OFFICE.

LEWIS T. ADAMS, OF WHITMAN, MASSACHUSETTS.

## TOOL FOR GRINDING OR POLISHING HEELS.

SPECIFICATION forming part of Letters Patent No. 619,921, dated February 21, 1899.

Application filed June 1, 1898. Serial No. 682,242. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS T. ADAMS, of Whitman, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Tools for Grinding or Polishing Heels, of which the following is a specification.

This invention has relation to tools or devices for grinding or polishing plane surfaces, such as the faces of the heels of boots or shoes; and it has for its object the provision of a device of this character having improved means for clamping the grinding or polishing material across the face of the tool, whereby the said material is prevented from wrinkling and its usefulness is prolonged.

The invention is illustrated as embodied in a guiding-tool whose operative face is covered with felt, rubber, or other suitable material. The grinding, abrading, or polishing material—such as sandpaper, emery, cloth, or sile-sia—is cut in circular form and its edge is clamped between two telescoping rings, the rings being bodily adjustable relatively to the tool, so as to draw the sandpaper or other material taut across the cushion.

Reference is to be had to the accompanying drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 represents an edge view of a tool embodying the invention. Fig. 2 represents a section through the same with the clamping-rings open to receive the edge of a sheet of sandpaper. Fig. 3 represents a similar view with the sandpaper drawn taut over the face of the tool. Fig. 4 represents a rear view of a portion of the tool.

In carrying out the invention I employ a tool consisting of a disk *a*, having a circumferential externally-threaded flange *a'*. The disk is either formed with an arbor *a<sup>2</sup>* or else it is centrally apertured to receive the end of a shaft or arbor. Upon its face the disk has a pad or cushion *b*, of felt, rubber, or any other desirable material which will furnish a desirable backing for the abrading, grinding, or polishing material. Upon the disk are screwed two telescoping rings *c* *d*, one threaded into the other and adjustable relatively

thereto. One of the rings *c* is tapering or inwardly beveled at its front end *c'* and the other, *d*, has an inwardly-projecting lip *d'*, which is beveled so as to correspond therewith, the two beveled surfaces forming clamping-jaws which are continuous.

The abrading, grinding, or polishing material *e* is cut into circular form and is a little greater in diameter than the cushion or pad *b*, and its edge is inserted between the ends of the rings, after which the outer ring is screwed upon the inner one to bring their clamping edges, which are parallel in cross-section, tight against it. Then the two rings are screwed upon the disk, back from the front face thereof, as shown in Fig. 3, to draw the sheet *e* taut over the pad or cushion, the strain upon the said sheet being radial thereof, whereby it remains unwrinkled and smooth.

To hold the ring *c* stationary while the ring *d* is being screwed thereon, it is provided with an internal socket *c<sup>2</sup>*, which may be brought to register with an aperture *a<sup>3</sup>* in the rim or flange of the disk, and a pin *a<sup>4</sup>*, under the tension of a spring *a<sup>5</sup>*, is projected through the aperture into the socket to lock the ring *c* and the disk together. To hold the pin out from the socket *c<sup>2</sup>*, there is a catch *a<sup>6</sup>* on the disk with which the spring may be engaged, as shown in Fig. 3.

When the clamping-rings are being adjusted relatively to the disk, the latter or its arbor may be held in any suitable way against movement.

It will be noticed that the beveled clamping edges when viewed in section are substantially in or parallel to the lines of strain or the direction of pull upon the sheet *e*, so that there is no danger of cracking or breaking it when drawing it taut.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. A tool of the character described comprising a rotatable support, a sheet having an operative surface, and clamping devices supplemental to said support and having two continuous coacting jaws for clamping the



edge of the material between them, whereby it may be drawn taut over the face of the support.

2. A tool of the character described comprising a rotatable disk, a sheet of material having an operative surface, and rings for clamping the edge of the material between them, said rings being bodily adjustable axially of the said disk.

3. A tool of the character described comprising a rotatable disk which is externally threaded, an internally-threaded ring screwed adjustably on the disk, and a clamp for clamping a sheet of grinding material on the said ring.

4. A tool of the character described comprising a rotatable externally-threaded disk, telescoping clamping-rings screwed on the said disk, and a sheet of material having its edge clamped between the said ring.

5. A tool of the character described comprising a rotatable disk and two clamping-rings adjustable axially of said disk, said rings having beveled clamping edges for clamping

the edge of a sheet of grinding, abrading or polishing material.

6. A tool of the character described comprising a rotatable disk, a cushion or pad on the face of said disk, and two clamping-rings adjustable relatively to each other, said rings being bodily adjustable axially on the disk, and one having a tapering end, and the other an inwardly-projecting beveled lip or flange for clamping the edge of a sheet of grinding, abrading or polishing material.

7. A tool of the character described comprising a rotatable externally-threaded disk, two telescoping rings of which the inner one is screwed on the disk and in the outer ring, said rings having coacting clamping edges, and devices for locking the inner ring to the said disk.

In testimony whereof I have affixed my signature in presence of two witnesses.

LEWIS T. ADAMS.

Witnesses:

ARTHUR D. B. BUTLER,  
ISAIAH T. CHURCHILL.