

(No Model.)

2 Sheets—Sheet 1.

H. STRAW.
ENGRAVER'S BLOCK.

No. 564,543.

Patented July 21, 1896.

Fig. 1.

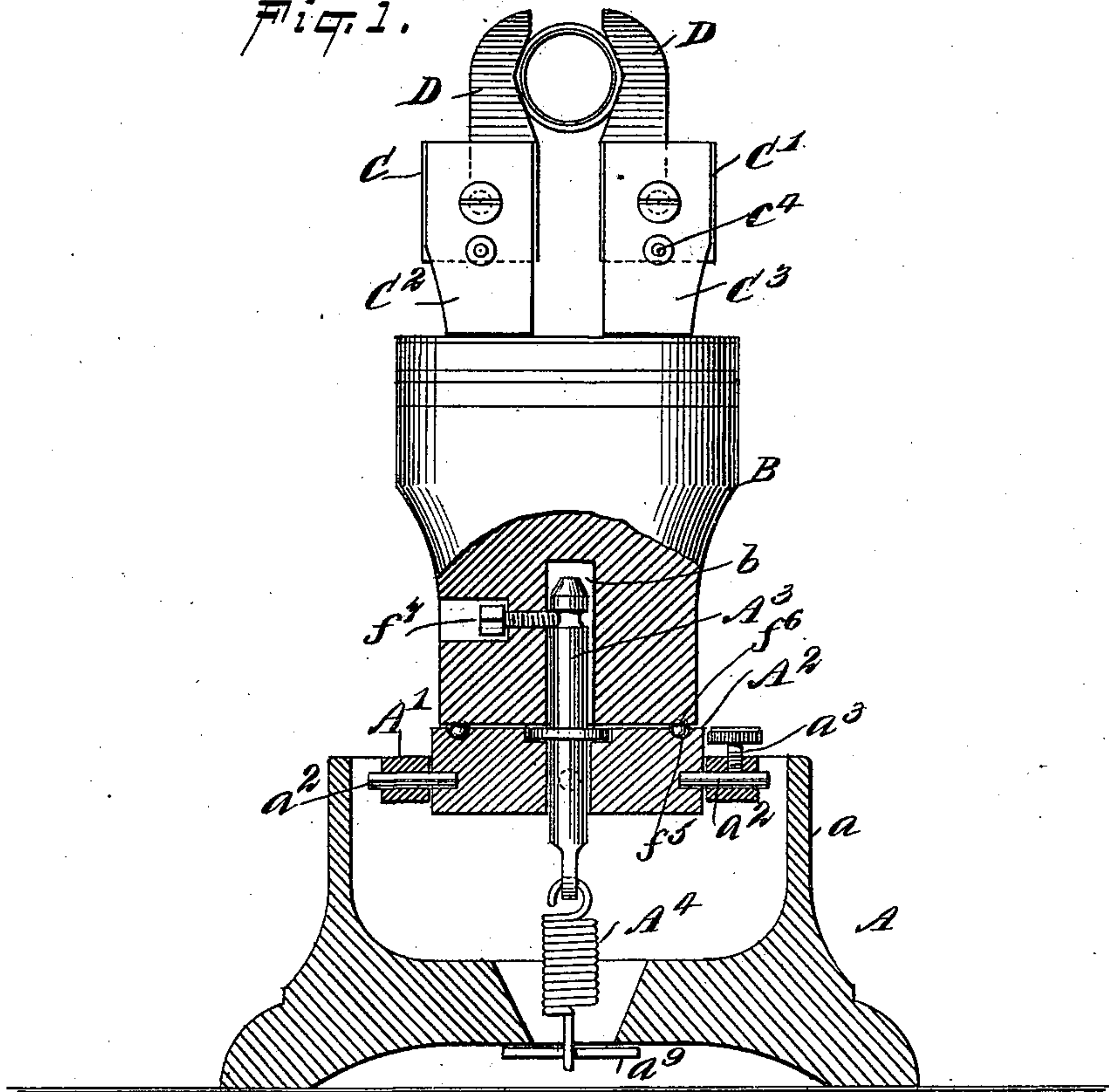


Fig. 11.

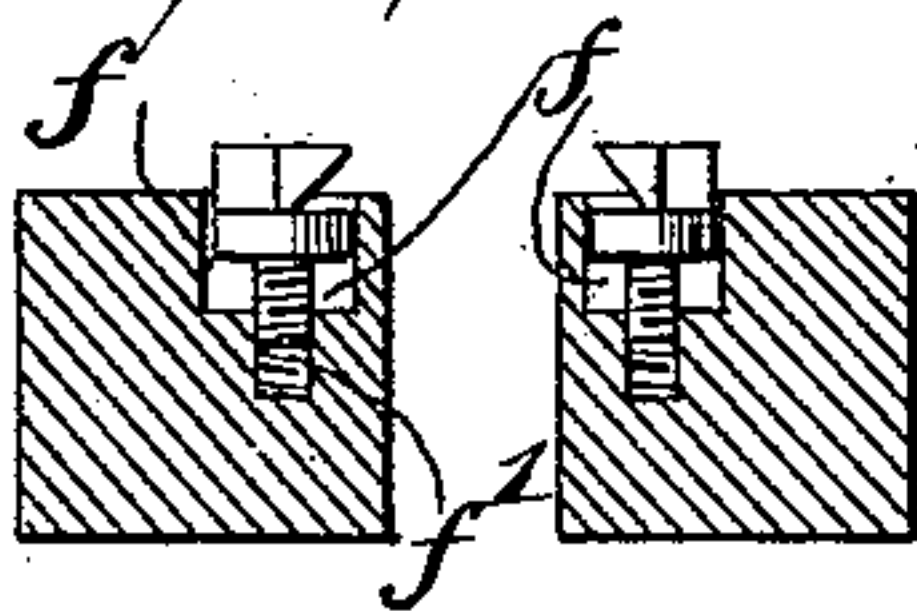


Fig. 2.

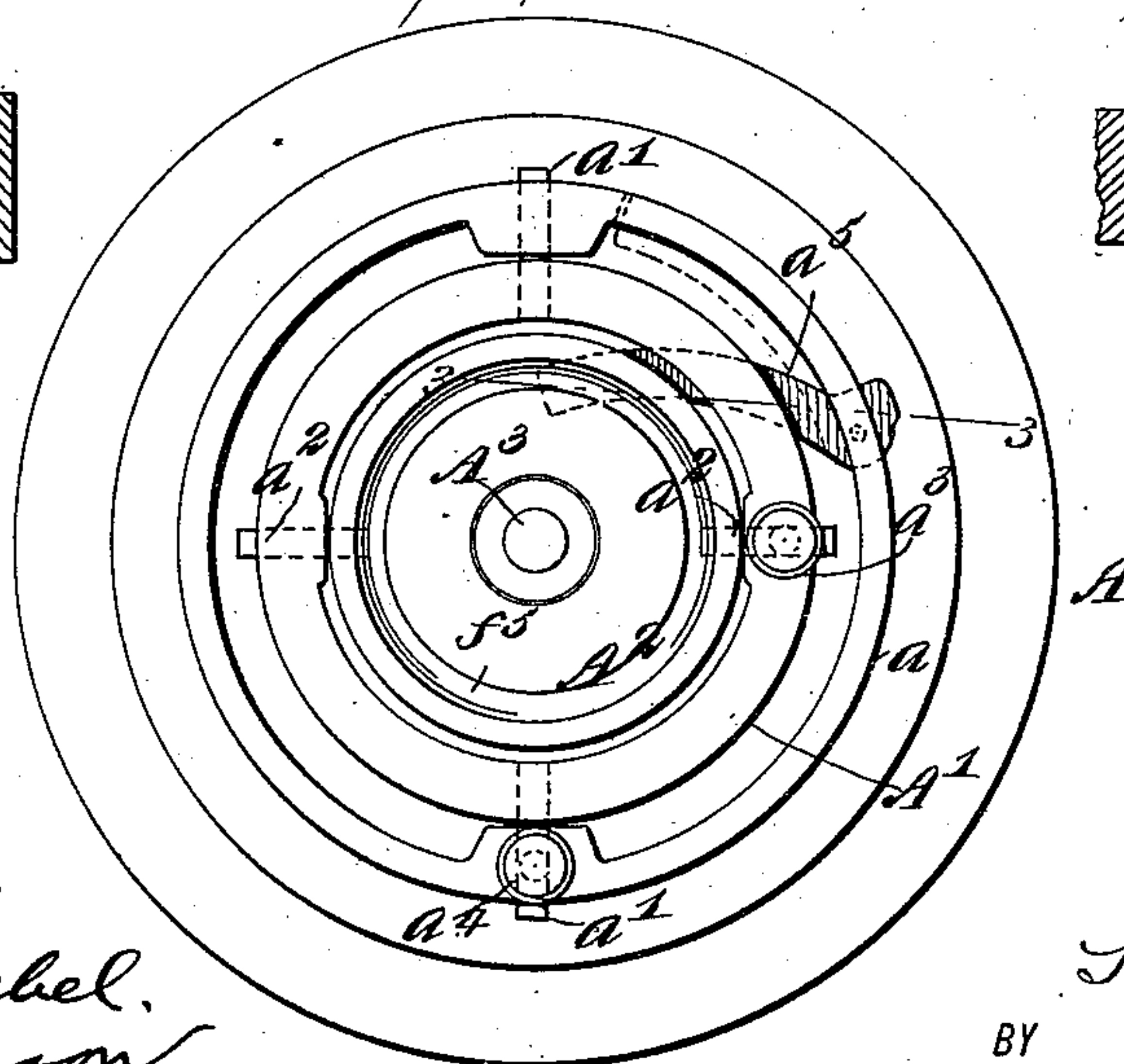
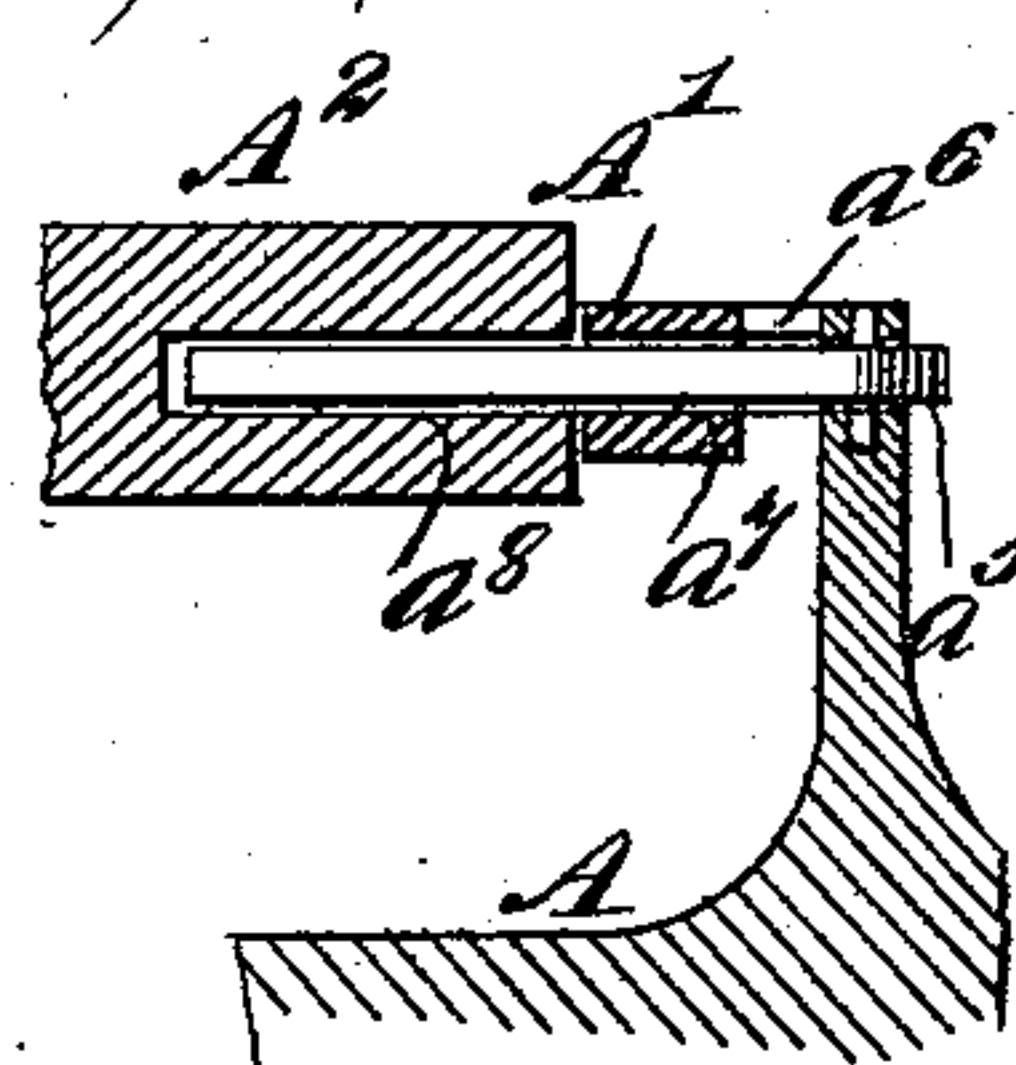


Fig. 3.



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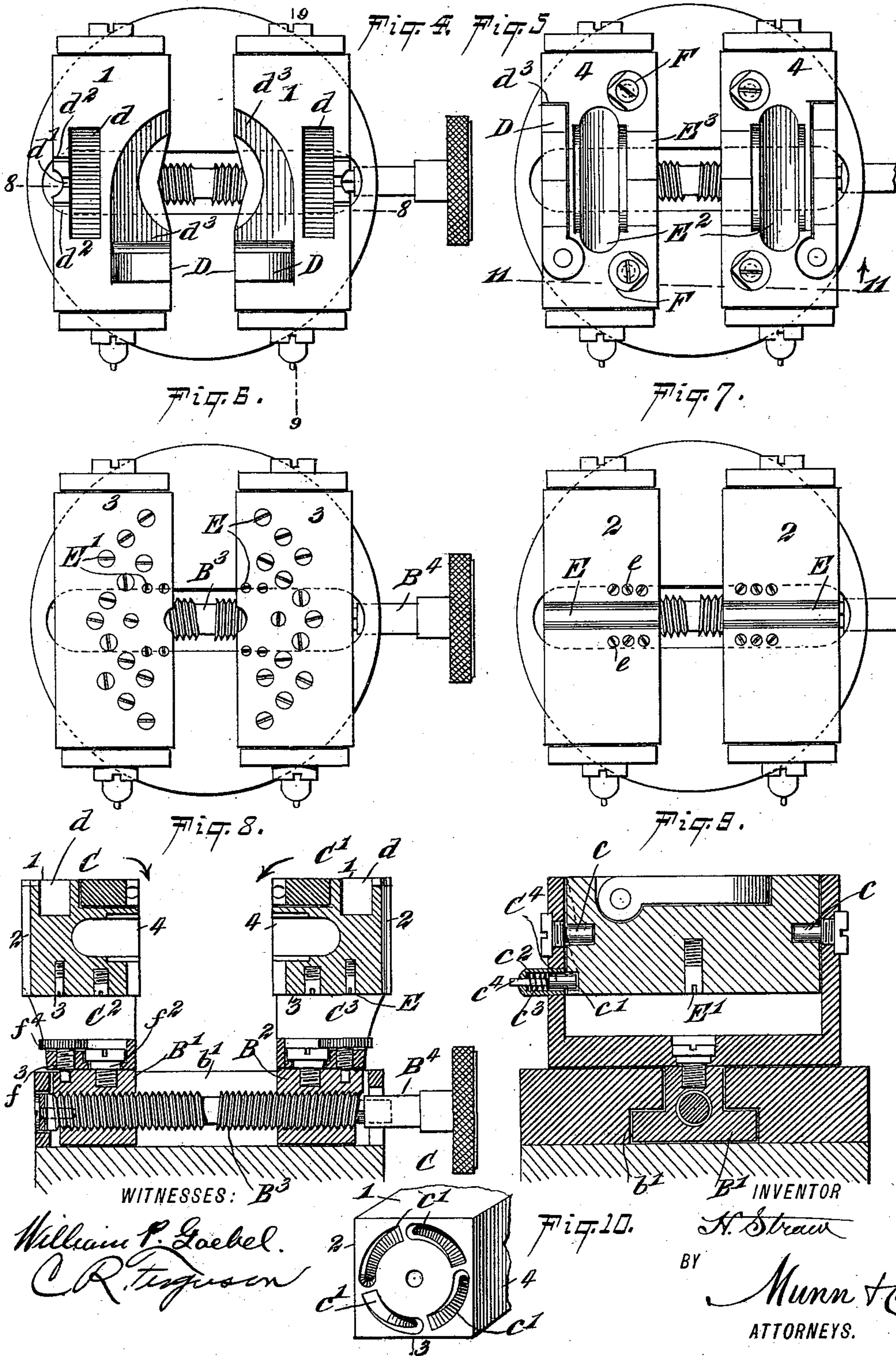
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

HENRY STRAW, OF GARNER, IOWA.

ENGRAVER'S BLOCK.

SPECIFICATION forming part of Letters Patent No. 564,543, dated July 21, 1896.

Application filed August 22, 1895. Serial No. 560,129. (No model.)

To all whom it may concern:

Be it known that I, HENRY STRAW, of Garner, in the county of Hancock and State of Iowa, have invented certain new and useful
5 Improvements in Engravers' Blocks, of which the following is a full, clear, and exact description.

This invention relates to tools for firmly clamping and holding articles to be engraved;
10 and the object is to provide a tool of simple construction that may be easily and quickly adjusted and adapted to the work in hand.

The invention comprises clamping-blocks adapted to rotate on substantially horizontal
15 axes, and having their several faces provided with means for receiving and holding the articles to be engraved, and means is provided for adjusting the blocks, one relatively to the other, for clamping the work.

It further consists in means for providing
20 a universal motion for the tool; and it further consists in the construction and novel arrangement of parts, as will be hereinafter specified, and particularly set forth in the appended claims.

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.

30 Figure 1 is an elevation, with the base portion in section, of an engraver's block embodying my invention. Fig. 2 is a plan view of the base portion. Fig. 3 is a section on the line 3 3 of Fig. 2. Figs. 4, 5, 6, and 7
35 are plan views showing the different clamping or receiving devices on the blocks. Fig. 8 is a section on the line 8 8 of Fig. 4. Fig. 9 is a section on the line 9 9 of Fig. 4. Fig. 10 is an end view of one of the blocks, and
40 Fig. 11 is a section of the blocks on the line 11 11 of Fig. 5.

Referring to the drawings, A designates a base of any suitable material, preferably metal. It is here shown as cup-shaped or
45 having an upwardly-extended annular flange a . A' shows a ring having trunnion-bearings a' in the upper portion of the base-flange a , and A^2 is a bed-block having trunnion-bearings a^2 in the ring A' . It will be seen
50 that the trunnion-bearings of the bed-block A^2 are at right angles to the trunnion-bearings of the ring A' , so that the parts may

rock, one transversely to the other. As a means to hold the bed-block in a fixed position relatively to the ring, I may employ a set-screw a^3 , passing through a tapped hole in the
55 ring A' and designed to impinge upon a trunnion a^2 , and a similar set-screw a^4 is extended through a tapped hole in an inwardly-extended lug on the flange a of the base to im-
60 pinge upon a trunnion a' and prevent movement of the ring relatively to the base. By means of these set-screws the parts may be secured at any desired angle relatively to the base. As a means to secure both the parts
65 A' A^2 in a horizontal position or in a plane with the top of the base, I employ a dog a^5 , pivoted at one end in a horizontal slot a^6 in the flange a and adapted to move its free end through a slot a^7 in the ring A' and into a
70 recess a^8 , formed in the edge of the bed-block.

A pintle A^3 extends upward from the bed-block, and, as here shown, it has a portion extended downward loosely through a central hole in the bed-block, and to the lower end of
75 said portion one end of a spring A^4 is attached, the other end of said spring being attached to a pin a^9 , extended across an opening in the bottom of the base. This spring provides a yielding anchor for the parts A' A^2 to pre-
80 vent their rocking by the weight of parts supported thereby, but will allow the rocking of the parts under pressure.

B is a standard having a vertical opening b formed in its lower portion adapted to en-
85 gage over the pintle A^3 , so that the lower end of the standard will rest upon the bed-block A^2 , and so that the standard may have a rotary motion relatively to the bed-plate.

B' B^2 are carrier-blocks movable in a guide-
90 way b' , formed transversely in the upper portion of the standard B and movable therein by means of a screw-rod B^3 , having a left-hand thread to engage a correspondingly-tapped opening through one of the carrier-
95 blocks and with a right-hand thread to engage a correspondingly-tapped opening through the other block. One end of the screw-rod B^3 has a journal connection with an end wall of the guideway b' and its opposite end is adapted
100 to be engaged by a key B^4 . Obviously by rotating the screw-rod the carrier-blocks may be moved toward or from each other.

C C' designate clamping or holding blocks

secured, respectively, to frames C^2 C^3 , which are respectively attached to the carrier-blocks B' B^2 , and as these blocks and their appurtenances are alike in every particular a detailed description of one will answer for both. The block C is made angular in cross-section. As here shown, it has four sides or faces 1 2 3 4. The block is adapted to rotate on pins c , having screw-thread engagement with the upwardly-extended portions of the frame C^2 , and the end of the block is provided with four segmental recesses c' , each recess being inclined inward from one end to the other, as indicated by the dotted lines in Fig. 9.

C^4 is a detent supported in a boxing c^2 , having an opening through the frame C^2 , as indicated in Fig. 9, and this detent is forced longitudinally inward to engage in the recesses c' by means of a spring c^3 , surrounding a stem portion c^4 within the boxing c^2 . By this arrangement the block can be rotated in one direction only, or in the direction indicated by the arrow in Fig. 8. As the block is rotated the detent will pass from the shallow end of one recess c' and move into the deep end of the next adjacent recess, and of course the end wall of this deep portion will prevent a reverse movement of the block.

In the side 1 of the block, near one edge, is formed a recess d , into which a portion of the shoe-plate of a collar or similar button may extend when it is desired to hold the button for the purpose of engraving the head. When the button is in position, its shank will be engaged in the groove d' , formed in the surface 1 and leading from the recess d to the surface 2. When the two blocks are moved toward each other, the head of the button will be upward above the surface 2. In case the head of a spiral stud is to be engraved, the portion of wire between the spiral and the head may be placed in one of the shallow grooves d^2 . A ring-clamping finger D is pivoted to move into and out of a recess d^3 , formed in the meeting edges of the surfaces 1 4. The finger is longitudinally and transversely concaved in its inner surface to engage a portion of the periphery of a ring when the fingers of both blocks are swung outward, as shown in Fig. 1. When the finger is not in use, it is to be swung into the recess d^3 , as shown in Fig. 5, so that the outer surfaces of the finger are flush with the adjacent surfaces of the block.

The surface 2 is intended for the holding of thimbles and similar articles, and it is provided with a transverse groove E , convex in cross-section, and with a series of screw-pins e at each side of the groove.

The surface 3 is designed for holding watch-cases, coins, bangles, and similar flat or substantially flat surfaces. It is provided with sets of screw-pins E' , arranged at varying distances from the edge of the block. In use corresponding screw-pins are turned outward sufficiently to engage the edge of the work to be engraved, and when not in use the outer

ends of the pins will be flush with the surface of the block.

The surface 4 is provided with a longitudinally and transversely curved recess E^2 , and extended outward from this recess is a depression E^3 , which is inclined from its ends to its center. This depression is in line with the concavity in the ring-holding finger D when the said finger is in its closed position. The surface 4, provided with the recess, is designed to receive and hold a cane or umbrella head or the like. The surface 4 is also provided with means for engaging the edges of a spoon or similar handle. This means consists of blocks F , rounded on one side and extended at an angle and undercut at the opposite side. The clamping or holding block is provided with holes f to receive the parts F , and these parts F are mounted to rotate on screw-pins f' , engaging in tapped holes in the clamping-block. When in use, the screws are loosened, so that the parts F will project above the surface of the block C , as shown in Fig. 11, but when not in use the parts will be held tightly within the holes f , with their outer ends flush with the surface 4.

The frame C^2 is secured to rotate on the carrier-block B' by means of a pivot-screw f^2 , and outward from the screw f^2 the bottom plate of the frame has a tapped opening through which a set-screw f^3 projects and is adapted to engage its end in a hole in the block B' when the frame is at right angles to the movement of the block. The head of this screw f^3 projects slightly outward, as at f^4 , and is milled, so as to be easily turned with the fingers when it is desired to turn the parts relatively to the carrier-block.

I have shown the upper face of the block A^2 as provided with an annular groove f^5 , in which ball-bearings f^6 are placed, and upon which the standard B turns. The standard may be held in place by means of a screw f^7 , passing through a tapped hole in the standard and engaging in an annular groove in the pintle A^3 , as plainly shown in Fig. 1.

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

1. An engraver's block, comprising a base, a ring adapted to swing relatively to the base, a bed-piece adapted to swing relatively to the ring, and a yielding anchor, substantially as specified.

2. An engraver's block, comprising a base having an upwardly-extended portion, a ring having trunnion-bearings in said portion, a bed-piece having trunnion-bearings in the ring at right angles to the ring-trunnions, and locking means for said trunnioned parts, substantially as specified.

3. The combination with a base, having an upwardly-extended flange, a ring having trunnion-bearings in said flange, a bed-piece having trunnion-bearings in said ring at right angles to the ring-bearings and the dog pivoted to the flange and movable into openings

in said ring and bed-piece, substantially as specified.

4. An engraver's block, comprising a cup-shaped base, a ring having trunnion-bearings therein, a bed-piece having trunnion-bearings in the ring, a pintle extended upward from the bed-piece, and a spring providing a yielding anchor for the trunnioned parts, substantially as specified.

10 5. An engraver's block comprising a rotary and rocking standard, a yielding anchor for said standard, carrier-blocks movable on said standard, means for moving the carrier-

blocks, a frame on each of said blocks and clamping-blocks mounted to rotate on said frame, substantially as specified. 15

6. An engraver's block comprising a work-holding block provided with a recess, and a ring-clamping finger pivoted in said recess, whereby it may be extended horizontally in said recess, and also vertically at right angles to the block, substantially as specified. 20

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Witnesses:

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