

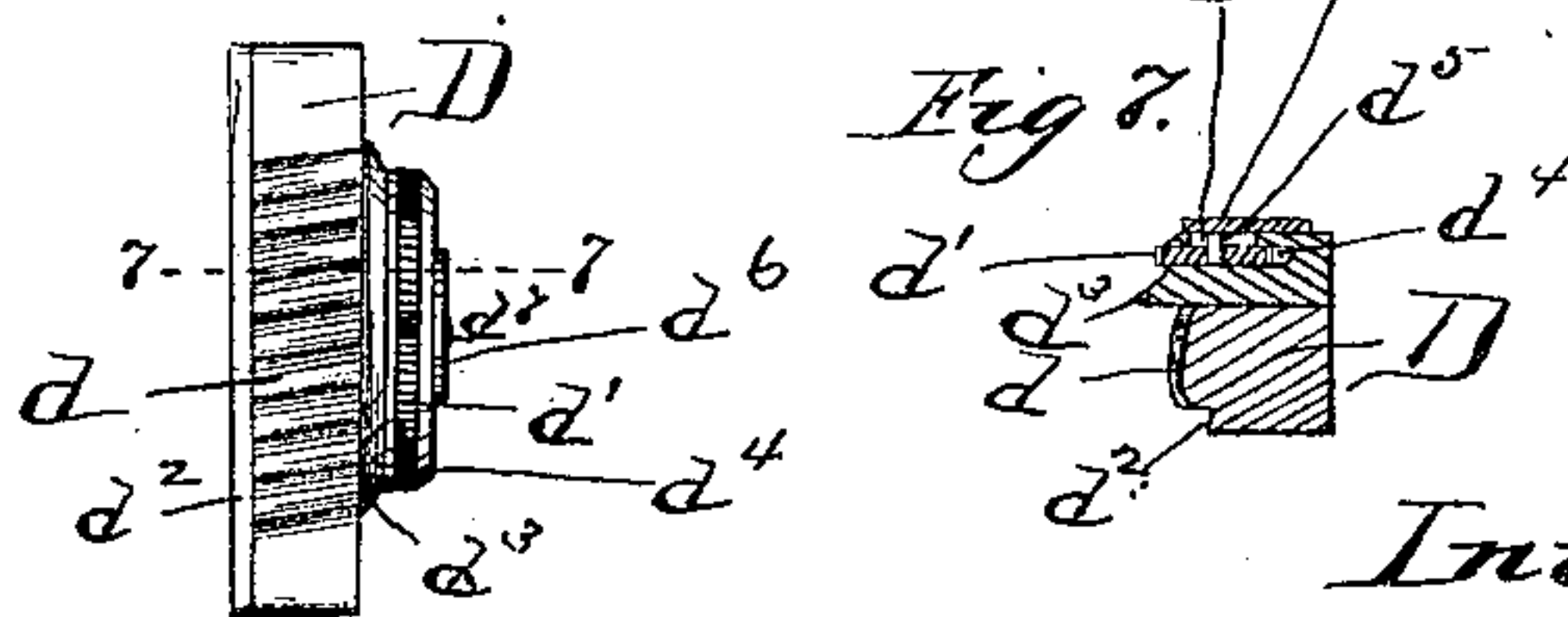
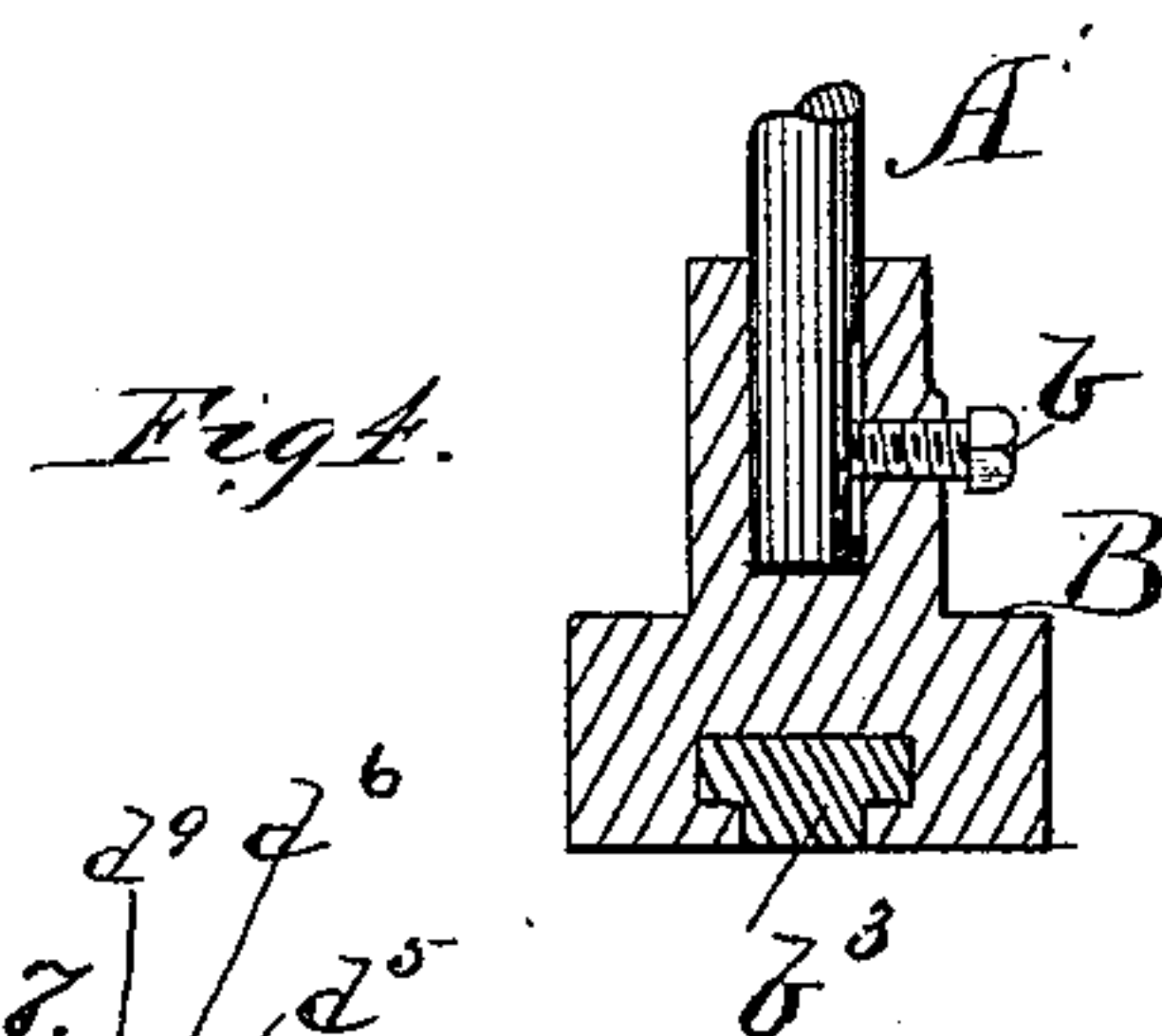
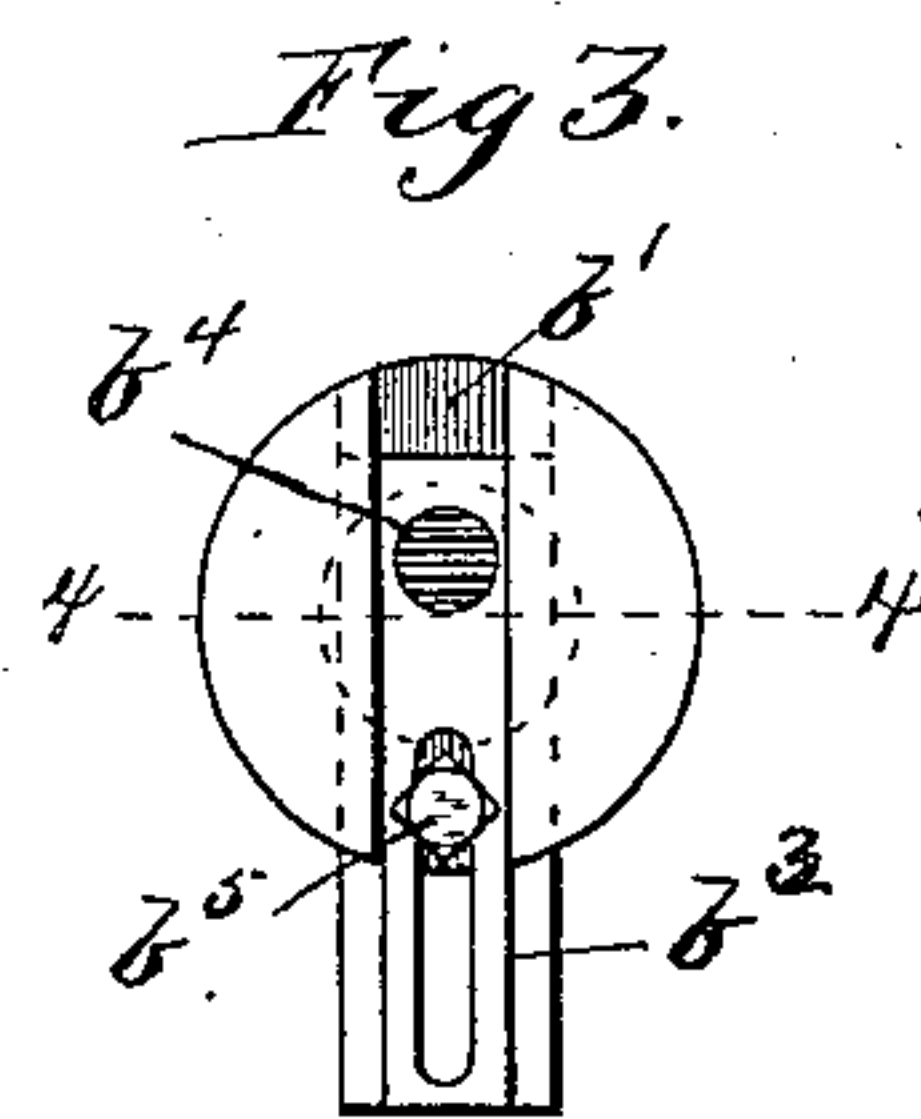
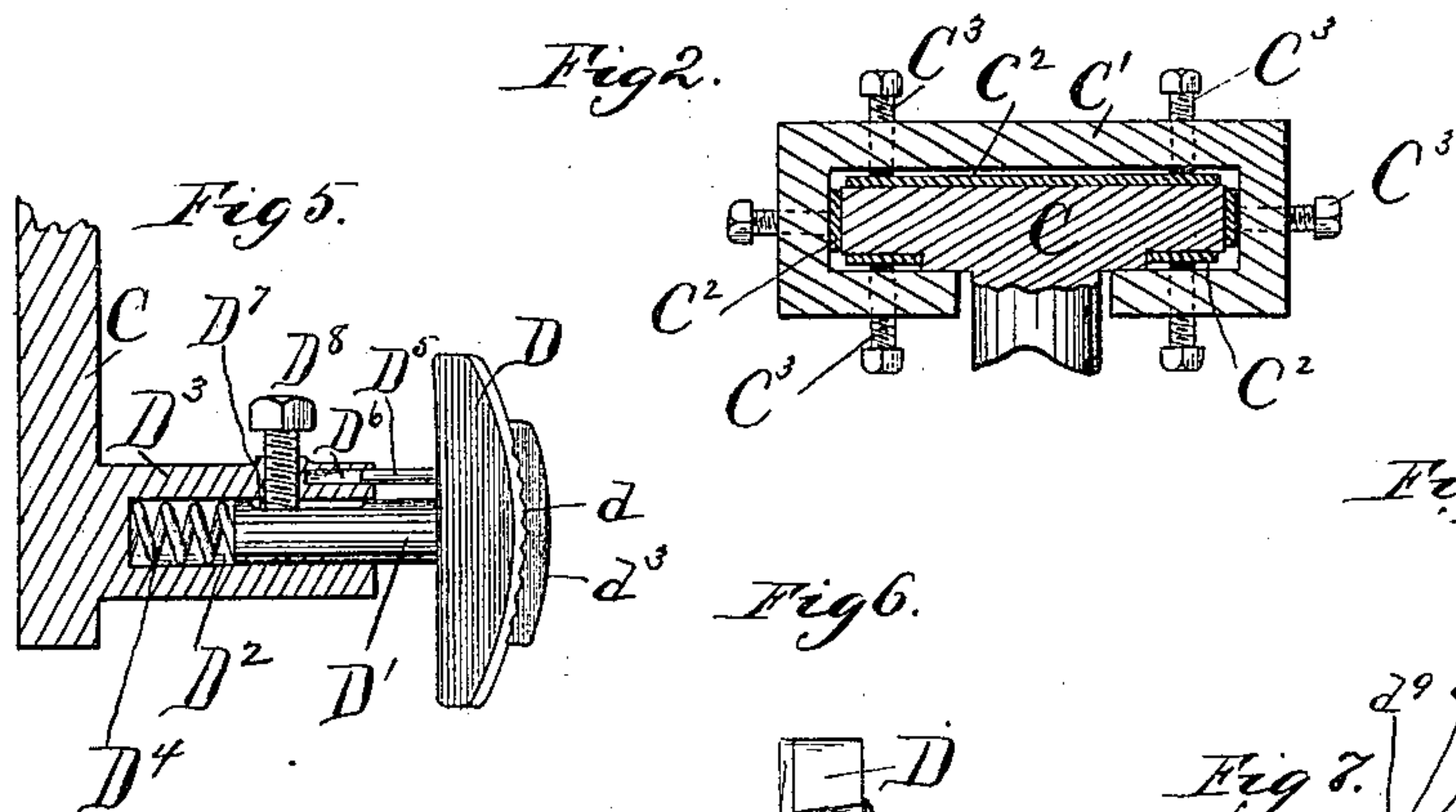
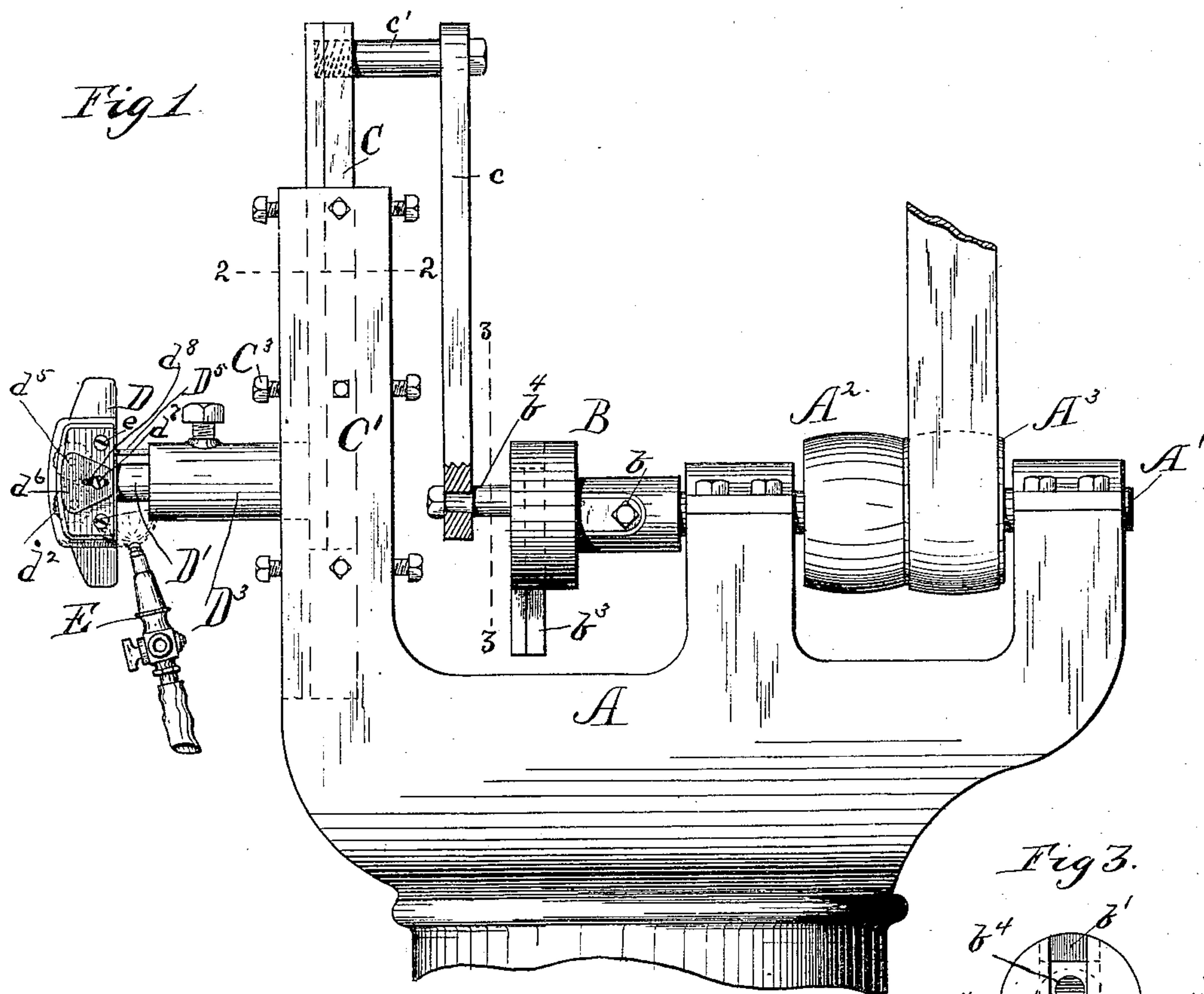
(No Model.)

G. F. CASS.

HEEL BURNISHING MACHINE FOR BOOTS AND SHOES.

No. 300,949.

Patented June 24, 1884.



Witnesses:  
Taylor E. Brown  
H. W. Munday.

Inventor:  
George F. Cass  
per Munday, Evans & Adcock  
his Attorneys:



# UNITED STATES PATENT OFFICE.

GEORGE F. CASS, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND  
HUGH WHITE, OF SAME PLACE.

## HEEL-BURNISHING MACHINE FOR BOOTS AND SHOES.

SPECIFICATION forming part of Letters Patent No. 300,949, dated June 24, 1884.

Application filed March 17, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE F. CASS, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Combined Top-Lift Bead, Seat-Wheel, and Heel-Burnishing Machines, of which the following is a specification.

The object of the present invention is to provide a cheap and simple machine, which will serve not only to burnish the heel, but to mill the heel-seat and to set the edge or bead the top lift of the heel. In order that the same tool or organism may serve to accomplish all these different purposes, I give it a simple straight reciprocating motion. The face of my heel-burnishing tool is provided at one edge with a lip, which fits in the crease at the bottom of the heel, and serves as a guide not only during the operation of burnishing the heel, but also while putting on the "seat-wheel," as it is called, or milling the seat of the heel. The opposite edge of the burnishing-tool is provided with a groove, which serves to bead the corner or top lift of the heel. As this combined tool has a simple reciprocating motion up and down, it will be seen that the operator can readily burnish the heel, put on the seat-wheel, and bead the top lift by simply turning or holding the heel in different positions to the tool, thus performing all these different operations by the same machine.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a cross-section on line 2 2 of Fig. 1. Fig. 3 is a vertical section on line 3 3 of Fig. 1, showing the wheel and adjustable wrist-pin in elevation. Fig. 4 is a section on line 4 4 of Fig. 1. Fig. 5 is a vertical section of the tool holder or head in which the tool is mounted. Fig. 6 is a face view of the tool, and Fig. 7 is a cross-section on line 7 7 of Fig. 6.

In the drawings, A represents the frame of the machine; A', the driving-shaft, suitably journaled thereon; and A<sup>2</sup> A<sup>3</sup>, the fast and loose pulleys on said shaft.

B is a wrist-pin wheel secured on the end of said shaft A' by a set-screw, b, which is provided with a dovetail or other suitable groove, b', in which groove fits the adjustable slide b<sup>2</sup>, which carries the wrist-pin b<sup>4</sup>. This slide may be secured in any position desired to give different lengths of stroke to the tool by means of the set-screw b<sup>5</sup>.

C is a reciprocating slide or tool-holder mounted in the vertical standard C' on the frame of the machine, and connected to the wrist-pin by the link c and pin c', so as to be reciprocated by the revolution of the shaft A'. The guide-groove in the standard C' for the head C is provided with adjustable box-plates C<sup>2</sup> C<sup>2</sup>, provided with set-screws C<sup>3</sup>, so that the wear may be taken up or compensated for by adjusting these screws, so that the head C may be always made to fit snugly in its guide.

D represents the reciprocating tool, which is provided with a burnishing-face, d, a heel-seat wheel, d', and a top-lift-beading groove or edge-setter, d<sup>2</sup>, and a projecting lip or flange, d<sup>3</sup>, to fit in the crease between the bottom of the heel and the counter. The burnishing-face d may preferably be provided with the usual oblique ribs, which will serve to facilitate its action. The lip d<sup>3</sup> is located between the burnishing-face d and the heel-seat wheel d', so that it will serve to guide the tool or hold the heel in proper position during both the burnishing operation and the milling of the heel-seat by the wheel or wheels d'. As the tool has a simple reciprocating motion, it is better to employ two heel-seat wheels, and to locate one each side of the central or middle line of the tool, because otherwise, unless the operator is careful to revolve the wheel properly as the tool reciprocates, the wheel may not bear against the seat at all times during the operation of milling the same. The heel-seat wheel d' is mounted in a slot or groove, d<sup>4</sup>, in the tool D, and it is journaled upon a pin, d<sup>5</sup>, rigidly secured to the adjustable plate d<sup>6</sup>, which plate is secured to the tool D by the set-screw d<sup>7</sup>, which passes through a slot, d<sup>8</sup>, in plate d<sup>6</sup>, so that said plate may be adjusted in order to project the seat-wheel more or less beyond the face of the tool, as may be desired in operating upon boots or



shoes of different sizes. To permit of this adjustment a slot,  $d^9$ , is made in the upper lip or flange of the tool D, through which the pin  $d^5$  projects. The tool D is secured rigidly to a horizontal pin or shank,  $D'$ , which fits in a hole,  $D^2$ , in the sleeve  $D^3$ , which is secured to or made integral with the reciprocating head C. A spring,  $D^4$ , is inserted in this hole back of the pin  $D'$ , so that the tool will have an elastic pressure against the heel during the several operations.

To hold the tool in its proper vertical position, a guide-pin,  $D^5$ , is secured to the tool, which fits in a corresponding hold,  $D^6$ , in the sleeve  $D^3$ . To permit the tool to have this sliding motion in and out against the spring, and still secure it in the sleeve  $D^3$ , I provide the pin or shank  $D'$  with a groove or recess,  $D^7$ , on its upper side, into which the end of the set-screw  $D^8$  projects, so as to prevent the spring forcing the pin  $D'$  entirely out.

E represents a gas jet or flame for heating the tool during the several operations.

By adjusting the wrist-pin slide any desired length of stroke may be given to the tool as may be required for different kinds of work.

The tool D, I have shown made in two parts, that in which the seat-wheel is mounted and which bears the lip  $d^3$  being secured to the other by the screws  $e$ . This I deem the preferable construction, as the lip  $d^3$  may in this way be more cheaply formed; but the tool D can of course be made in a single piece, if desired.

I claim—

1. The tool D, provided with burnishing-face  $d$ , seat-wheel  $d'$ , and top-lift-beading groove  $d^2$ , and guide-lip  $d^3$ , in combination with the reciprocating tool-holder C, guide-standard  $C'$ , shaft  $A'$ , wheel B, adjustable wrist-pin slide  $b^3$ , wrist-pin  $b^4$ , link  $c$ , and pin  $c'$ , substantially as specified.

2. The combination of the tool D, having a burnishing-face, a seat-wheel, and a guide-lip located between said burnishing-face and seat-wheel, with a reciprocating tool-holder slide, C, upon which said tool is mounted, and a spring for giving the tool an elastic pressure against the heel operated upon, substantially as specified.

3. The combination, with the reciprocating tool-holder provided with a hollow sleeve, of the tool D, having a shank fitting in said hollow sleeve, a spring, and a guide-pin for holding the tool in a vertical position, substantially as specified.

4. The combination of the reciprocating tool-holder slide, the tool mounted therein, provided with a burnishing-face and a heel-seat wheel, the shaft  $A'$ , and wrist-pin wheel provided with an adjustable wrist-pin for varying the length of stroke, and a link and pin connecting said wrist with said tool-holder slide, substantially as specified.

5. The vertically-reciprocating tool D, provided with the burnishing-face  $d$ , guide-lip  $d^3$ , and heel-seat wheel  $d'$ , mounted on a pin rigidly secured to an adjustable plate,  $d^6$ , so that the heel-seat wheel may be set in or out, as may be desired, substantially as specified.

6. The combination of the reciprocating tool D, provided with a burnishing-face, heel-seat wheel, and guide-lip, with reciprocating slide C, on which said tool is mounted, and the guide-standard  $C'$ , provided with adjustable box-plates, in which said tool-holder slide reciprocates, substantially as specified.

GEORGE F. CASS.

Witnesses:

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