

(No Model.)

3 Sheets—Sheet 1.

R. ASHE.

EDGE BURNISHING MACHINE.

No. 364,156.

Patented May 31, 1887.

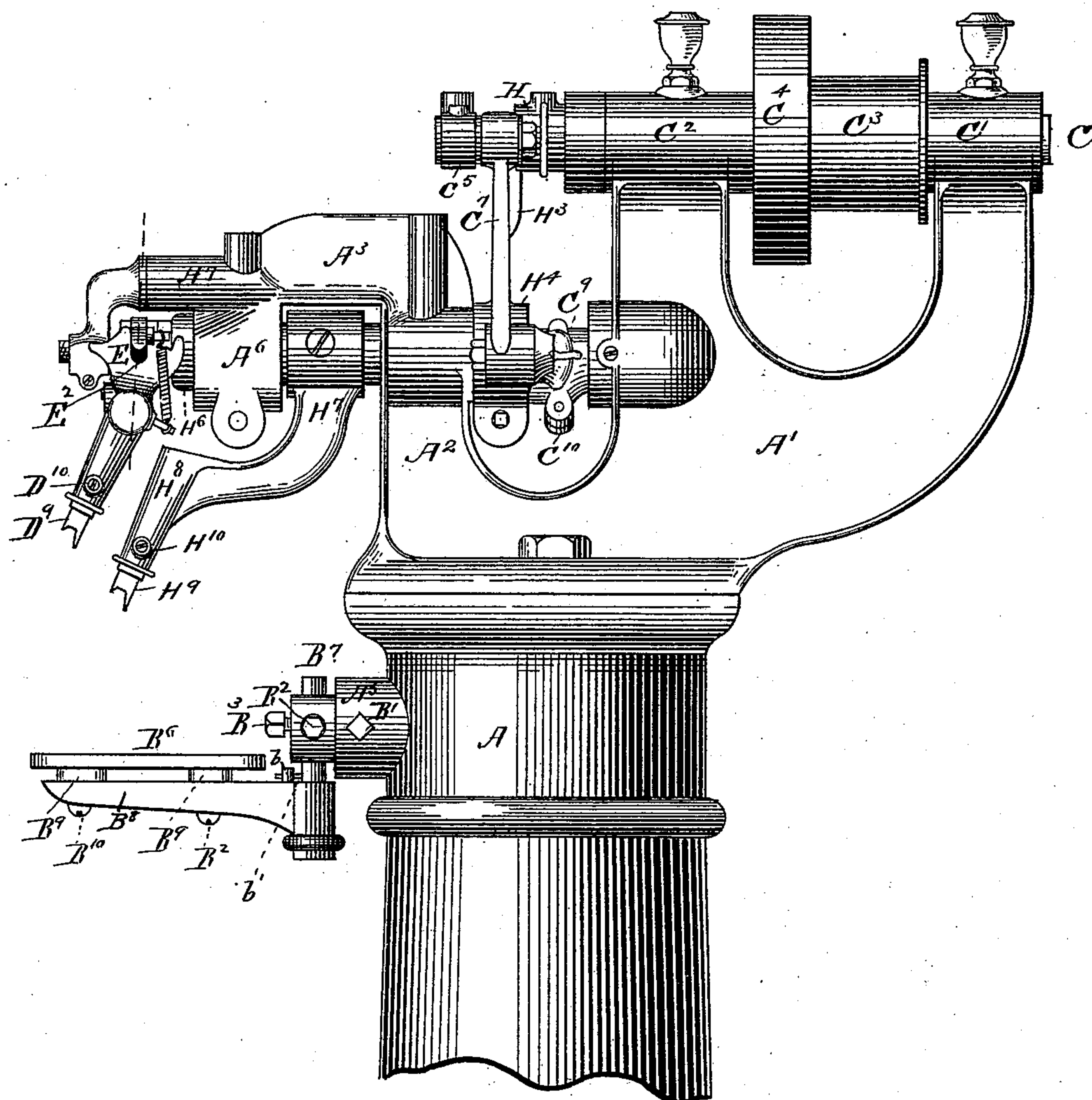


Fig. 1.

WITNESSES.

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William Edison

INVENTOR.

Robert Ashe

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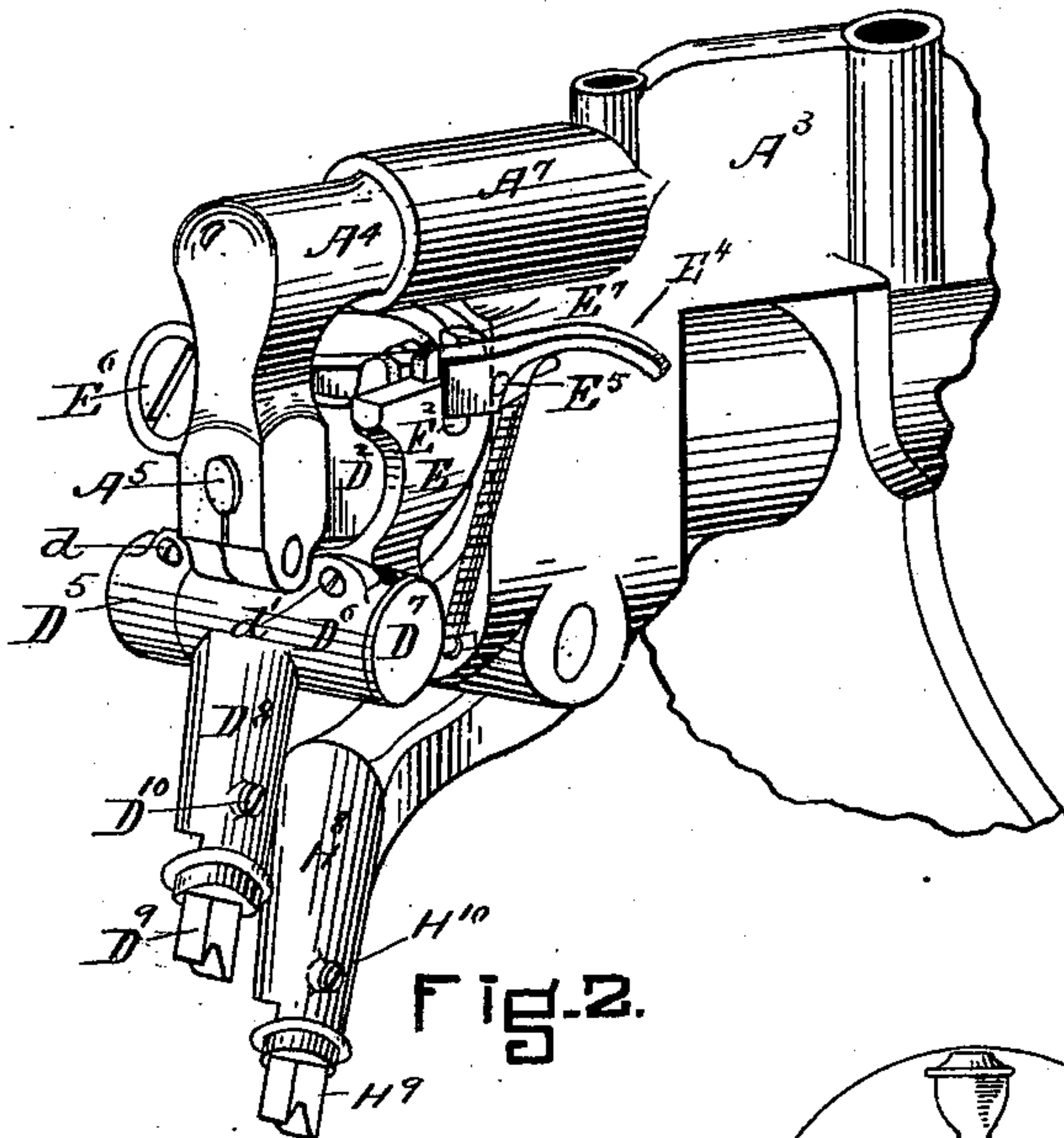


Fig. 2.

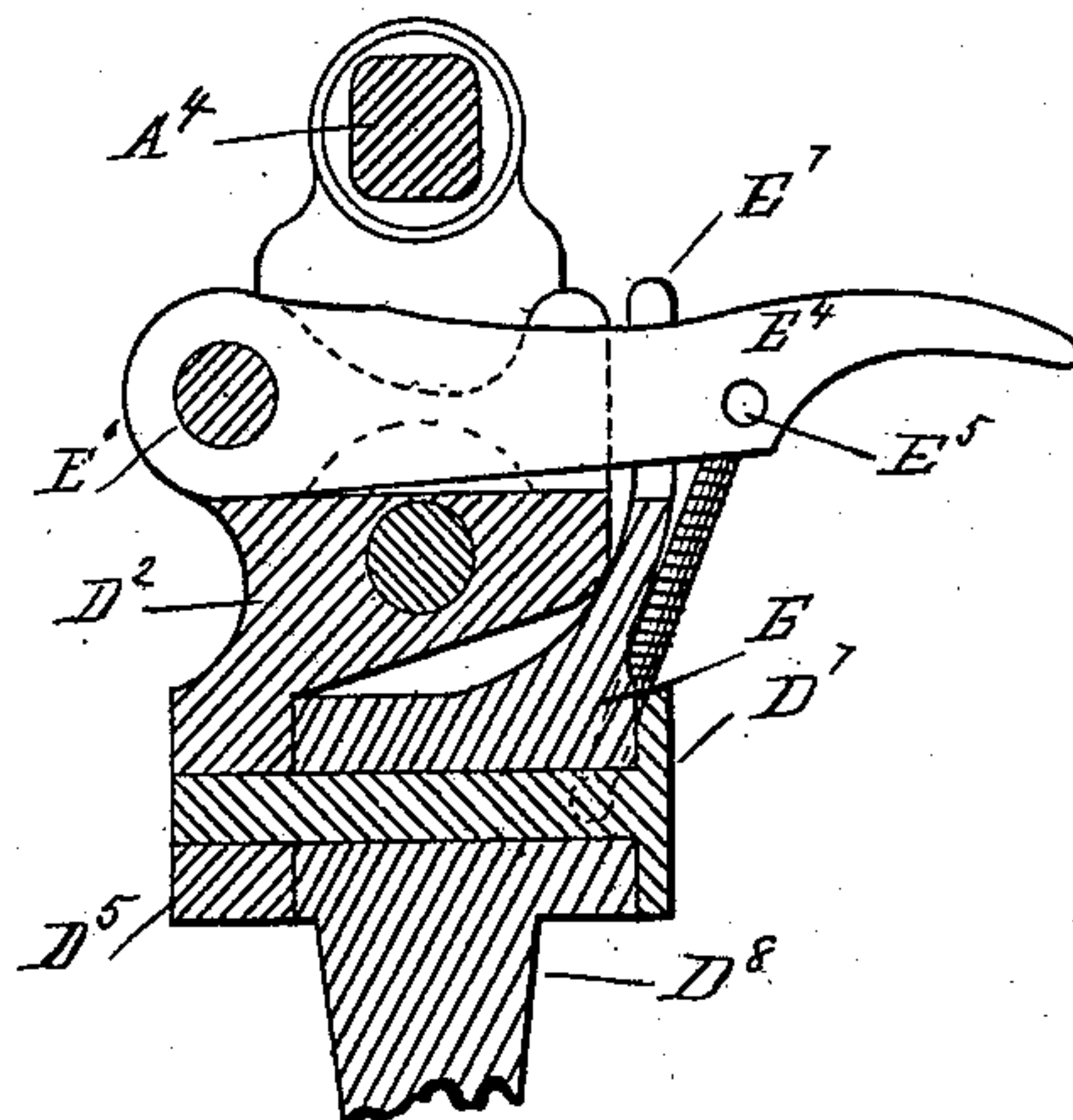


Fig. 3.

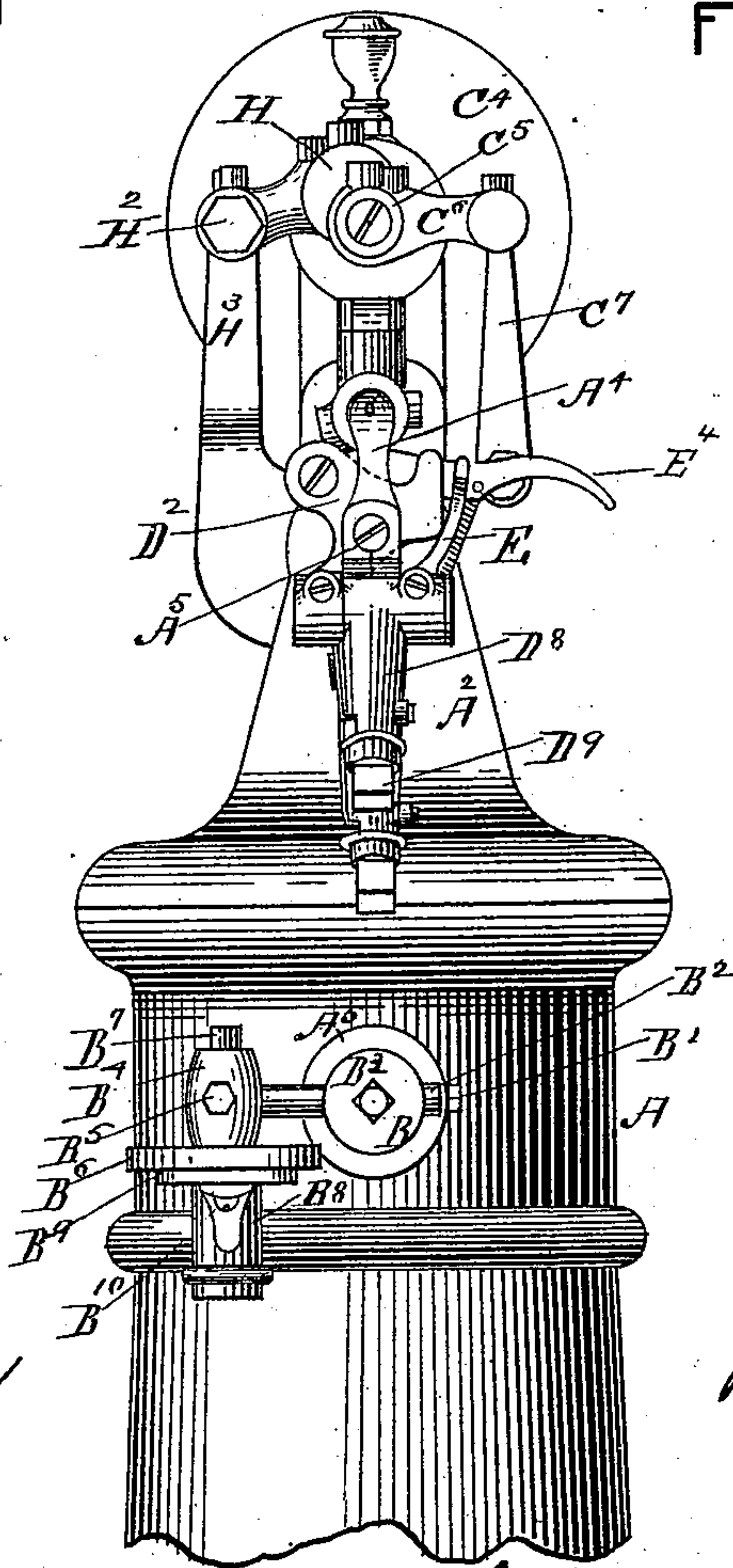


Fig. 4.

WITNESSES.

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William Brown

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(No Model.)

3 Sheets—Sheet 3.

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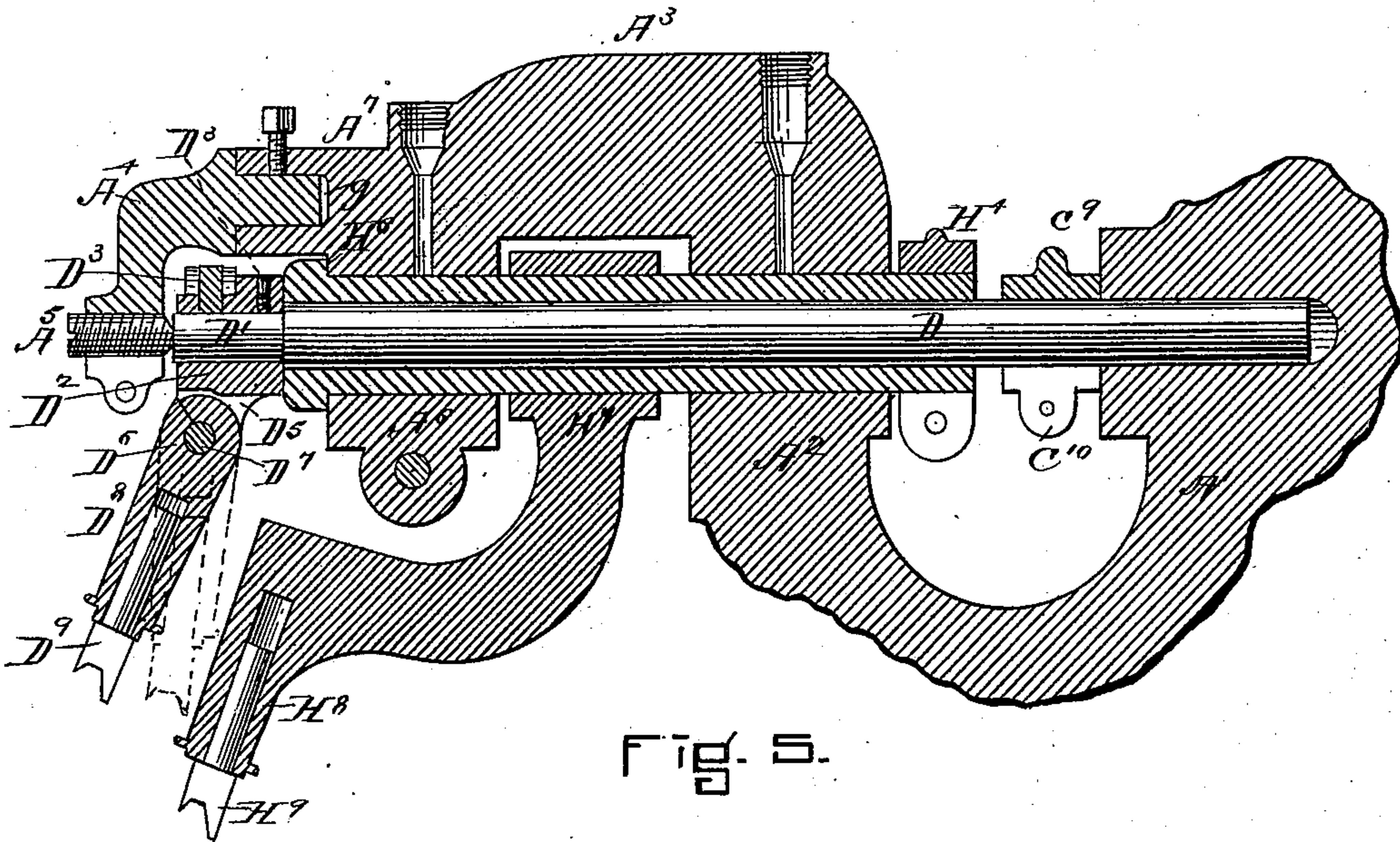


FIG. 5.

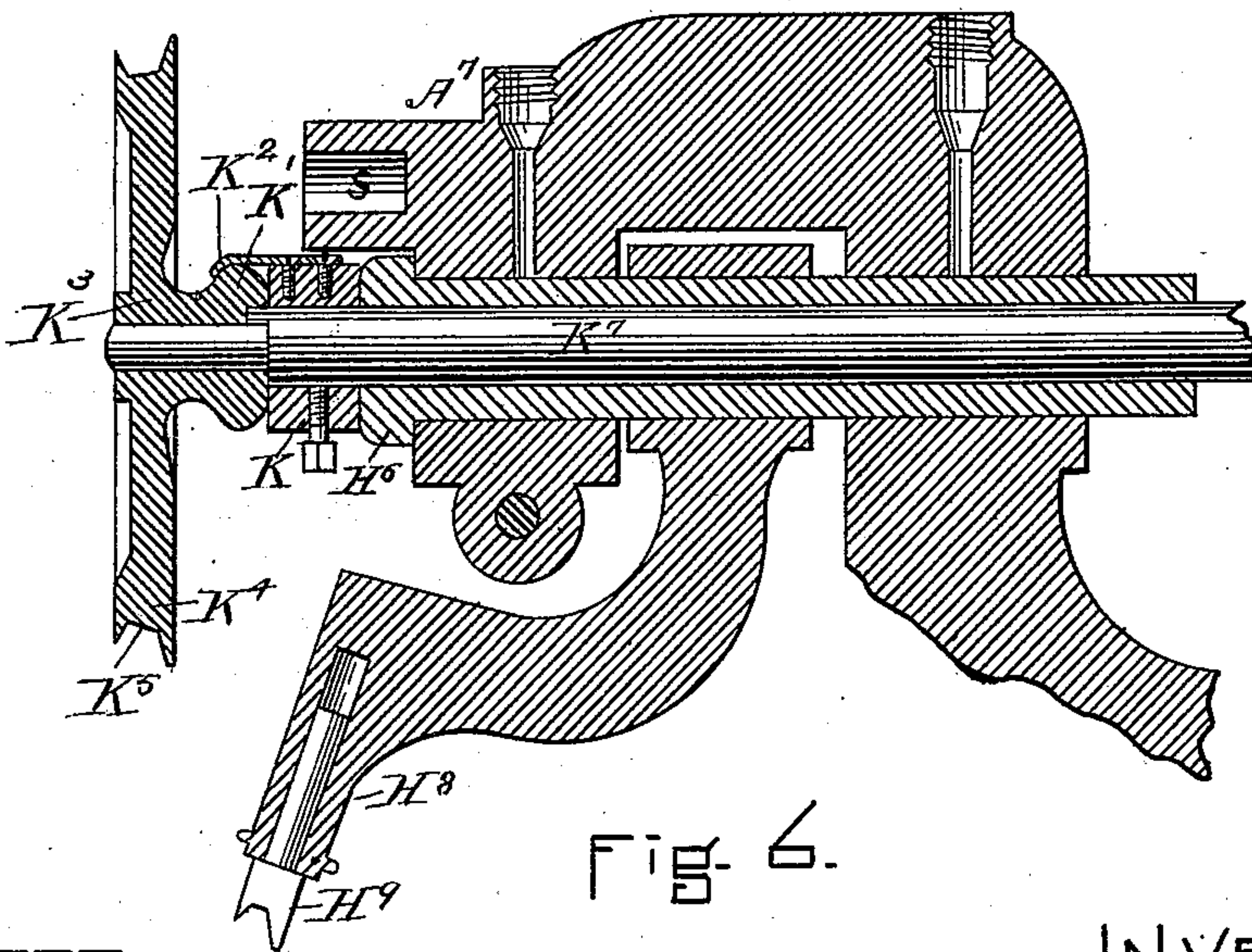


FIG. 6.

WITNESSES.

Frank G. Parker  
William Eason

INVENTOR.

Robert Ashe



# UNITED STATES PATENT OFFICE.

ROBERT ASHE, OF SOMERVILLE, MASSACHUSETTS.

## EDGE-BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 364,156, dated May 31, 1887.

Application filed November 8, 1886. Serial No. 218,319. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT ASHE, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Edge-Burnishing Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of edge-burnishing machines in which the boot or shoe to be operated upon is held and guided by the hands of the operator, the object being to so improve the construction of the operative parts that the jar or vibration usually resulting from the high rate of speed at which this class of machines are driven, and the consequent danger to the health of those who operate them, and the excessive wearing of the operative parts caused by such vibration are entirely overcome; also, to furnish an improved table-rest for supporting the hand or arm of the operator to assist him in holding the boot or shoe when any assistance is required. I attain these objects by the mechanism shown in the accompanying drawings, in which—

Figure 1 is an elevation showing all of the working parts of my machine, a part of the base being omitted as not needed in this case. Fig. 2 is a perspective view showing the burnishing-irons and their more immediate connecting parts. Fig. 3 is a vertical section showing details. Fig. 4 is a front elevation of my machine. Fig. 5 is a vertical section enlarged, showing in detail the parts connected to the burnishing-irons and their adjuncts; and Fig. 6 is a vertical section showing a method of connecting to one of the rocking shafts a circular burnishing-iron.

A, Figs. 1 and 4, shows the main post or standard, to which I attach my working machine.

A' A<sup>2</sup> A<sup>3</sup> A<sup>4</sup> A<sup>5</sup> A<sup>6</sup> A<sup>7</sup> C' C<sup>2</sup>, Fig. 1, constitute the frame of the machine.

C, Fig. 1, represents the main shaft of the machine. To this shaft C, I attach the driving-pulley C<sup>3</sup> and balance-wheel C<sup>4</sup>. To the end of the shaft C, by means of crank wrist-pins, I unite two working-links, H and C<sup>6</sup>, Fig. 4. These two working-links H and C<sup>6</sup>

serve to operate the two burnishing-irons H<sup>9</sup> and D<sup>9</sup>.

The burnishing-iron D<sup>9</sup> is operated as follows: The link C<sup>6</sup>, Fig. 4, is moved back and forth by its wrist-pin on the shaft C. The link C<sup>6</sup> is connected to the lever C<sup>7</sup>, Figs. 1 and 4, and by the lever and arm to the clamping-hub C<sup>9</sup>, Figs. 1 and 5. The clamping-hub C<sup>9</sup> is held firmly about rocking-shaft D, Figs. 5, 6, by a clamp screw at C<sup>10</sup>, so that any movement that is given to the link C<sup>6</sup> by its crank wrist-pin on the main shaft C is communicated to the working-shaft D. The rear end of the shaft D is held in place by the part A' of the frame, which it enters, as shown in Fig. 5, and the body of the shaft is held centrally by the hollow shaft H<sup>5</sup>, Figs. 5 and 6, through which it extends.

To the front end of the shaft D, I attach at D' a block, D<sup>2</sup>, Figs. 2, 3, 4, and 5. This block swings back and forth with the rocking of the shaft D, and has a projection or arm, D<sup>5</sup>, Figs. 2, 3, and 5, to which I attach, by means of a pivot, D<sup>7</sup>, the journal-piece D<sup>6</sup>, Fig. 2, the said journal-piece D<sup>6</sup> having extending downward from it the tool-holder D<sup>8</sup>, D<sup>9</sup> being the burnishing tool or "iron," which is held in place by a set-screw, D<sup>10</sup>, or other suitable means, Fig. 2. The arm D<sup>5</sup> is formed with a clamp, as indicated at d, Fig. 2, for the purpose of holding the journal-pin D<sup>7</sup>, Fig. 3. The journal-piece D<sup>6</sup> is also formed with a clamp, (see d', Fig. 2,) so that it shall have no looseness on the pin D<sup>7</sup>.

When the tool or iron D<sup>9</sup> is not in use, it and its holder D<sup>8</sup> may be turned on the journal-pin D<sup>7</sup>, so as to approach quite near to the other holder, H<sup>8</sup>, as indicated by dotted lines in Fig. 5. To secure the holder D<sup>8</sup> and iron D<sup>9</sup> in their desired positions, I have the following device:

An upwardly-projecting segment-arm, E, is attached to the journal-piece D<sup>6</sup>, Figs. 2 and 3. This segment-arm has a notch, E<sup>2</sup>, and a projection, E<sup>1</sup>, which engage, as may be required, with the lever E<sup>4</sup>, the lever E<sup>4</sup> being pivoted to the block D<sup>2</sup> by the pivot E<sup>6</sup>, Figs. 2, 3, and 4, and held down by the spring E<sup>5</sup>. When the iron or tool D<sup>9</sup> is in use, the lever E<sup>4</sup> rests in the notch E<sup>2</sup> and holds the tool D<sup>9</sup> out



ready for use, as shown in Fig. 1; but when the tool D<sup>9</sup> is not to be used the lever E<sup>4</sup> is raised out of the notch E<sup>2</sup>, and the tool D<sup>9</sup> and its holder D<sup>8</sup> are turned inward, (swinging on the journal-pin D<sup>7</sup>,) so that the lever E<sup>4</sup> rests against the projection E<sup>7</sup> and holds the holder and tool in the position indicated by the dotted lines in Fig. 5.

I will now describe my method of operating the second burnishing iron or tool, H<sup>9</sup>. On the main driving-shaft C, Fig. 1, I have a crank wrist-pin which operates the link H, Fig. 4, and the link in turn, acting through the pin H<sup>2</sup> and lever H<sup>3</sup>, which are connected to the hollow shaft H<sup>5</sup> by the hub H<sup>4</sup>, Figs. 4 and 5, causing the hollow rocking shaft H<sup>5</sup> to oscillate and to give a vibrating motion to the arm H<sup>7</sup>, tool-holder H<sup>8</sup>, and burnishing tool or iron H<sup>9</sup>. The burnishing tool or iron H<sup>9</sup> is held in place by the set-screw H<sup>10</sup>, or other suitable means.

In Fig. 6 I have shown a modified form of one of my burnishing tools or irons. To use the modified—that is, the circular—iron K<sup>1</sup>, I remove the rocking shaft D of Fig. 5, and insert in its place the rocking shaft K<sup>7</sup>, Fig. 6. To the end of the shaft K<sup>7</sup>, I firmly attach the boss K. This boss K has screwed to it a snap-latch, K<sup>2</sup>, the end of which engages with hub K<sup>3</sup> of the circular burnishing iron K<sup>4</sup> and holds it in place. K<sup>1</sup> is a projection on the shaft K<sup>7</sup>, which enters into a socket made in the hub K<sup>3</sup> and forces the circular iron K<sup>4</sup> to vibrate with the shaft K<sup>7</sup>. The bed K<sup>5</sup> of the burnishing tool or iron K<sup>4</sup> is inclined, as shown, so that the operator may be enabled to press the shoe or boot edge against it and not require any other rest for hand or fingers.

By arranging the rocking shafts H<sup>5</sup> and D and the clamping-hubs H<sup>4</sup> and C<sup>9</sup> as I have shown in Fig. 5, I am enabled to adjust the said hubs to compensate for the wear of the connecting and operating parts.

B<sup>6</sup>, Fig. 1, is a table which serves for a rest for the hands of the operator when such rest

is needed. The table is supported by the following-described means: A<sup>5</sup>, Figs. 1 and 4, is a projection extending from the standard A. Extending from A<sup>5</sup>, I have a large-headed bolt, B, the shank of which is held in place by the set-screw B<sup>1</sup>. Through the head of the bolt B a horizontal bar, B<sup>2</sup>, slides, said bar being held by a set-screw, B<sup>3</sup>. At the end of the bar B<sup>2</sup>, I attach a hub, B<sup>4</sup>, and vertically in it is placed an adjustable rod, B<sup>7</sup>, held by the set-screw B<sup>5</sup>, Fig. 4. To the lower end of the rod B<sup>7</sup>, I attach an arm B<sup>8</sup>, Fig. 1, which supports the table B<sup>6</sup> by screws B<sup>10</sup> B<sup>10</sup> and bosses B<sup>9</sup> B<sup>9</sup>.

To prevent the table B<sup>6</sup> from swinging around too far, I place a stud, b, on the arm B<sup>8</sup> and a pin, b', in the rod B<sup>7</sup>. This device will allow the table to swing to the right against the standard A and out of the way of the operator, but will limit its motion to the left—that is, it will allow the table to swing out just far enough for use and no farther.

I claim—

1. In an edge-burnishing machine, the combination of the main shaft C, having upon it wrist-pins, the links H C<sup>6</sup>, levers H<sup>3</sup> C<sup>7</sup>, and adjustable clamping-hubs C<sup>9</sup> H<sup>4</sup> with the rocking shaft D and hollow rocking shaft H<sup>5</sup>, all operating together substantially as described, and for the purpose set forth.

2. In an edge-burnishing machine, the combination of the rocking shaft D, the arm D<sup>2</sup>, and journal piece and tool-holder D<sup>6</sup> D<sup>8</sup> with the segment-piece E<sup>2</sup> and lever E<sup>4</sup>, all operating together substantially as described, and for the purpose set forth.

3. In an edge-setting machine, the combination of the bolt B, sliding bar B<sup>2</sup>, and hub B<sup>4</sup> with the adjustable rod B<sup>7</sup>, swinging arm B<sup>8</sup>, and table B<sup>6</sup>, all substantially as described, and for the purpose set forth.

ROBERT ASHE.

Witnesses:

WILLIAM EDSON,  
GEORGE LEONARD.