

(Model.)

2 Sheets—Sheet 1.

W. JOINT.
Heel Polishing Machine.
No. 231,673. Patented Aug. 31, 1880.

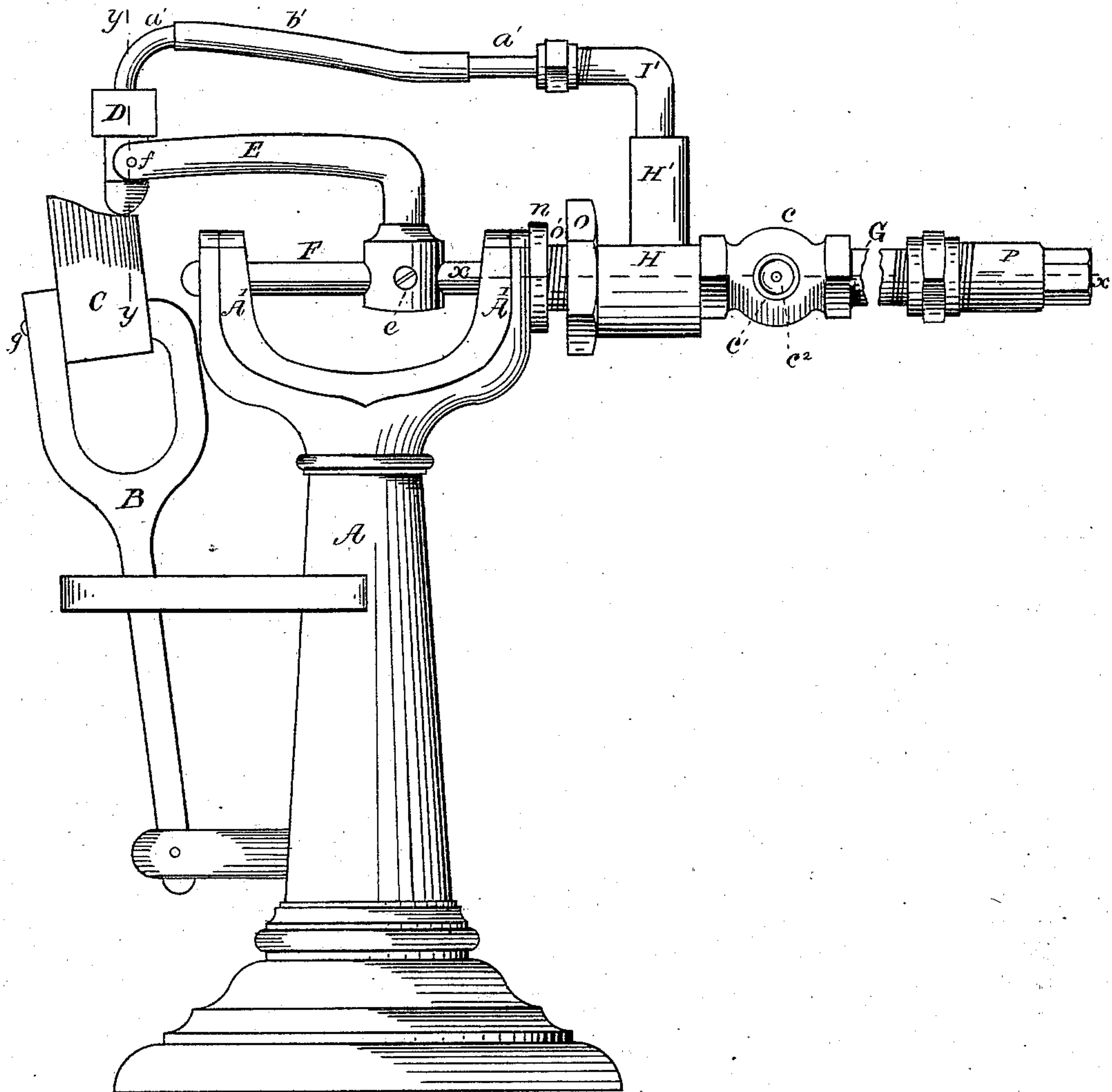


Fig. 1.

WITNESSES

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R. J. Haylor

INVENTOR

William Joint
By his attorney
J. A. Newton

(Model.)

2 Sheets—Sheet 2.

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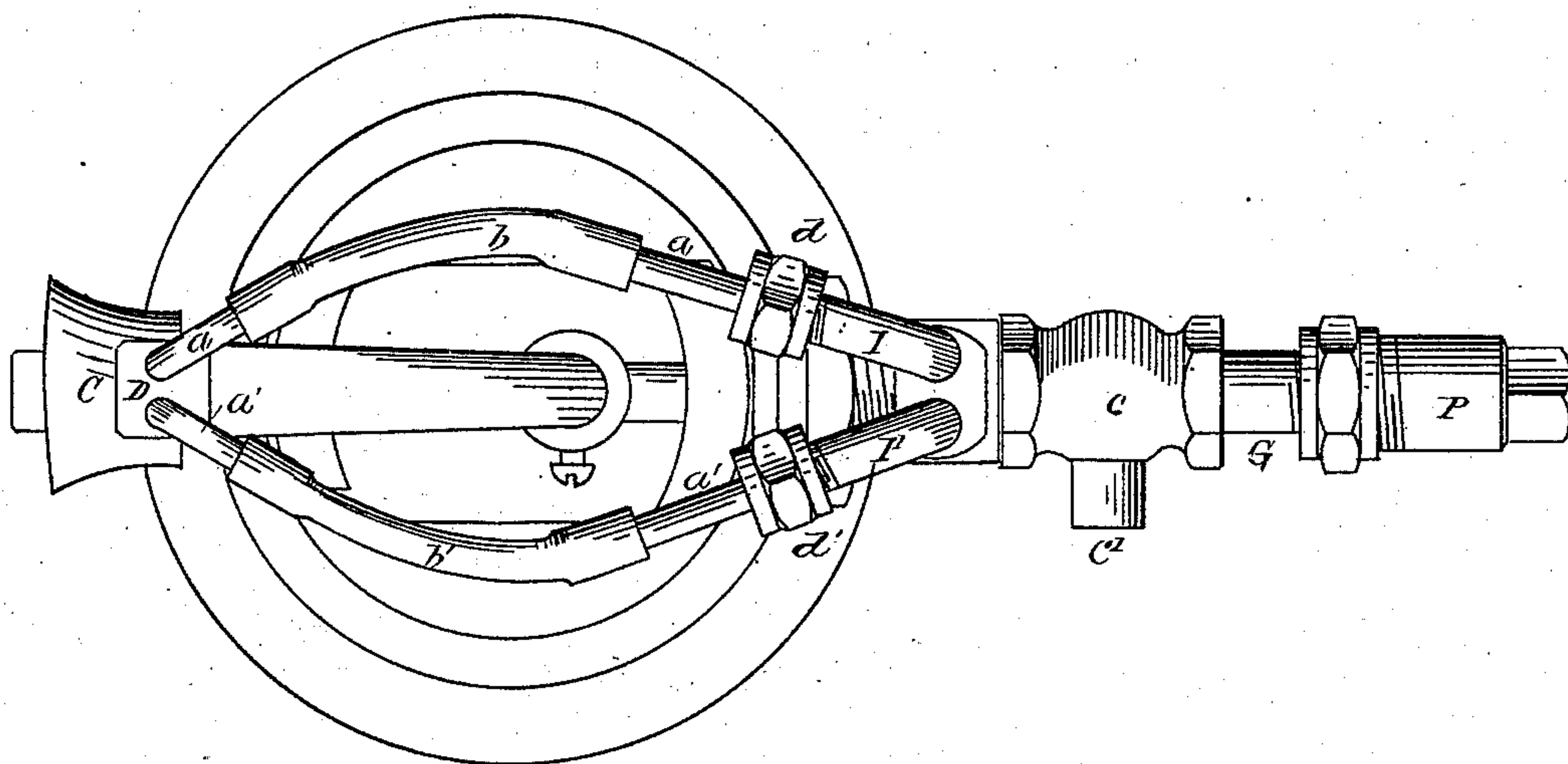


Fig. 2.

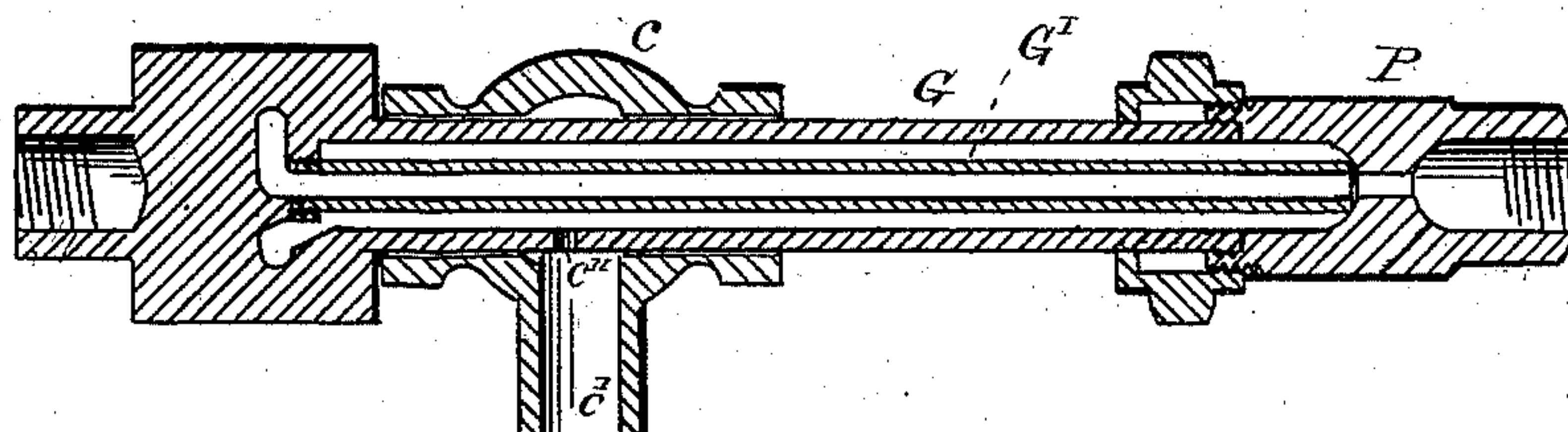


Fig. 3.

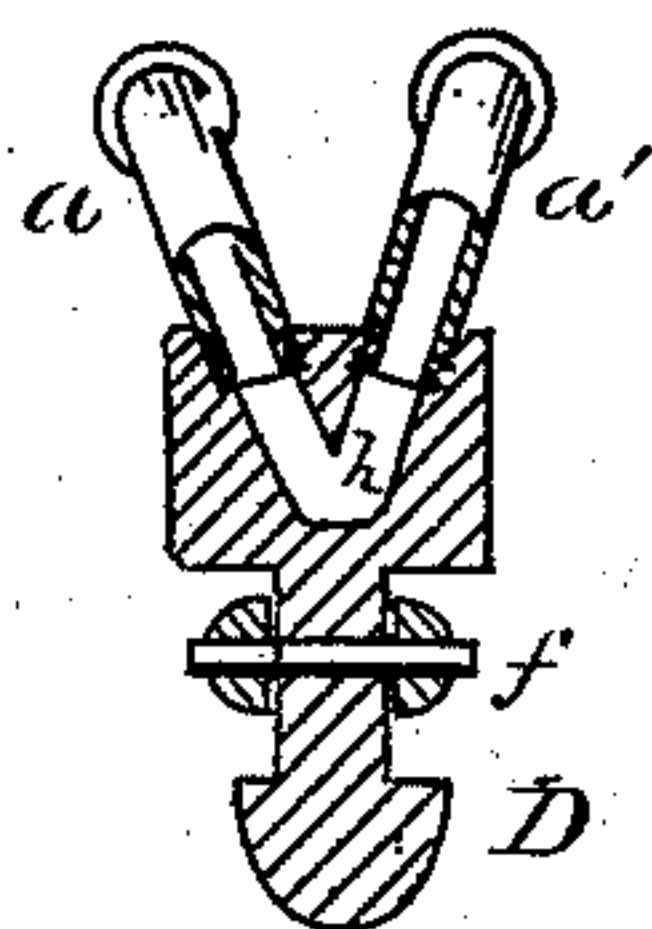


Fig. 4

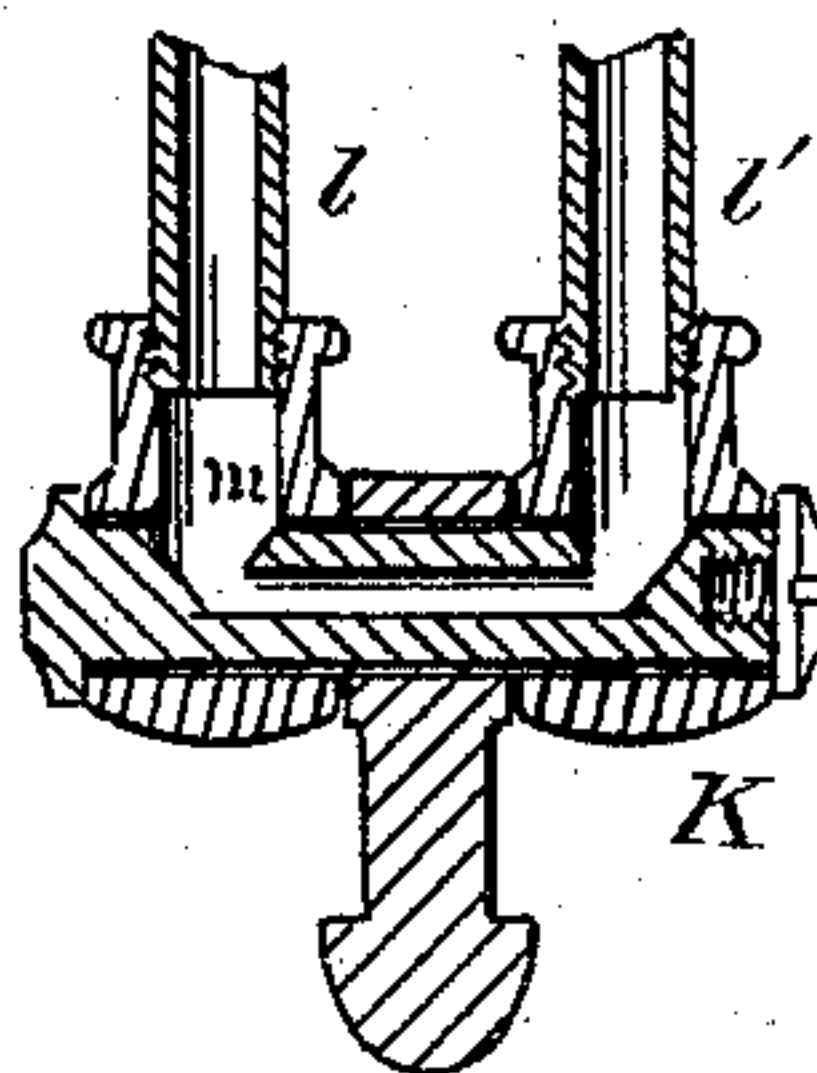


Fig-5.

WITNESSES

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INVENTOR

William Joint
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UNITED STATES PATENT OFFICE.

WILLIAM JOINT, OF LYNN, MASSACHUSETTS.

HEEL-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 231,673, dated August 31, 1880.

Application filed April 26, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM JOINT, of Lynn, in the county of Essex and State of Massachusetts, have invented new and useful
5 Improvements in Heel-Polishing Machines, of which the following is a specification.

My invention relates to improvements upon a heel-polishing machine issued to myself and Geo. B. Dunham, of date 28th of December, A.
10 D. 1875, from the Patent Office of the United States, wherein two steam-pipes were incased in a hollow rocking shaft, and said pipes were provided with flexible joints and other devices
15 outside of the rocking shaft, whereby steam constantly flowed through one of the said pipes into the hollow polishing-tool for the purpose of heating, and then was returned through the other pipe, and was expelled from the machine. In this invention the rocking shaft had to be
20 drilled its entire length. Instead of this method of conveying steam to and returning steam from the polishing-tool, I have invented a shaft hollow in part, containing a single pipe incased within the hollow part, and the rest
25 of said shaft is solid; and I have provided devices for conveying steam to and returning steam from the polishing-tool outside of the solid part of said rocking shaft, thereby saving the expense of drilling. I have also a solid
30 polishing-tool instead of the hollow polishing-tool, thereby saving heat. And the object of the invention is to produce a better polishing-tool and save expense in drilling the rocking shaft; and I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the machine. Fig. 2 is a plan of the same. Fig. 3 is a horizontal section of Fig. 1 in line *xx*. Fig. 4 is
40 a vertical section of the polishing-tool and part of the pipes in line *yy*; and Fig. 5 is a horizontal section of a modification of the pin holding the arm and polishing-tool together.

The letter A represents the standard or column; B, the jack; C, the heel; D, the solid
45 polishing-tool; E, the tool-arm attached to a rocking shaft, F, said arm carrying at its other extremity the tool D; A' A', arms of the standard A, bearing the rocking shaft F; G, hollow
50 steam-cylinder, containing in its hollow a steam-pipe, G'. H and H' are blocks having

steam-passages for the induction and eduction of steam; I and I', inlet and outlet pipes, respectively, and are attached to the top of block H'; *a a*, conduction steam-pipes, and *a' a'*
55 eduction steam-pipes; *b* and *b'*, flexible joints; *c*, sleeve upon the hollow cylinder G, covering an orifice in the same; *c'*, an opening into the sleeve, and *c''* a vent in said hollow shaft; *d* and *d'*, nuts upon the pipes I I'; *e*, a set-
60 screw holding the arm E to the shaft F; *f*, a pin holding the tool-arm and tool together; *g*, a set-screw bearing through one of the arms of the jack against the heel; *h*, steam-passage in head of polishing-tool; *k*, the modification of the pin *f*; *l* and *l'*, pipes attached to
65 said modified pin; *m*, channel from one pipe into the other; *n*, washer upon shaft F, next to arm A, and *o* is a nut turning upon a screw, *o'*. P is a coupling, which is screwed at one
70 end to the end of the hollow shaft G, and the other end receives a pipe which inlets the steam used for heating the polishing-tool; *x x*, horizontal section of a part of the hollow shaft, and *y y* vertical section of pipes *a* and *a'*, the
75 polishing-tool and pin.

I will now show in what manner the steam is introduced and made to heat the polishing-tool, and then is educted from the same, and wherein my invention in this respect differs
80 from my former invention.

The horizontal section of the hollow shaft G and the pipe G', the sleeve *c*, and coupling P is clearly seen in Fig. 3, which is a section
85 of Fig. 1 in line *xx*. The sleeve *c* and coupling P, of course, are packed steam-tight, and through this coupling P (shown in said Fig. 3) the steam flows in, and goes through the tube G in a steam-channel through the
90 blocks H and H' (see Figs. 1, 2, 3) into the bent pipe or conductor I, (see Fig. 2,) through the pipe *a*, flexible joint *b*, pipe *a*, to the head of the polishing-tool D, heating the polisher. It then flows through the steam-passage in the polishing-tool, (see Fig. 4,) and thence out
95 through pipe *a'*, joint *b'*, pipe *a'*, bent pipe or conductor I', through a steam-channel in said block H' and H, into the hollow shaft G, (see Fig. 3,) and makes its escape through the vent
100 *c''* and opening *c'*, and drips or is carried by pipe or other device to any convenient receptacle.

In my former patent the rocking shaft is in one piece, drilled its entire length, and the inlet and outlet pipes are incased within this shaft, and the conduction-pipes and flexible joints inlet to and educt from the polisher the steam through these pipes.

In my present invention it will be seen that the drilling of the shaft is dispensed with, except in part, and that the steam is carried to and returned from the polisher outside of the shaft F, thereby saving the expense of drilling. I also employ an arm, E, which, sliding on the shaft F, carries the polisher.

It will be seen, also, that the polisher is solid, save the steam-passage shown in Fig. 4. The advantage of a solid polisher is, that when once heated it is less liable to cool and will continue heated with less application of steam, and cannot burst.

Figs. 1 and 4 show that the solid pin *f* goes through the neck of the polisher from side to side. Instead of a pin of this construction, I suggest that a modification thereof may be made, as shown by Fig. 5, wherein a pipe, *l*, (same as pipe *a*, Fig. 2,) enters the passage *m*, and steam flows into and through the passage *m* and out through the pipe *l'*, (same as pipe *a*, Fig. 2.) The modified pin is simply a double

joint, such as are seen in gas-fixtures, and a polisher may be heated by this device instead of the above-described method.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine for polishing the heels of boots and shoes, the combination of the hollow shaft G, provided with a vent therein, *c''*, the pipe G', the blocks H and H', provided with steam-passages in them, the conductors I and I', the pipes *a a' a'*, the flexible joints *b* and *b'*, the solid polisher D, having a steam-passage, *h*, therein, the sleeve *c*, provided with an opening, *c'*, whereby a current of steam is made to flow into and heat the solid polisher D and escape therefrom, substantially in the manner and for the purpose shown and described.

2. The combination of the oscillating shaft F, the sliding arm E, and the described polishing-tool D, the same being connected by a pin, *f*, which allows a rocking motion of the polisher upon the heel, substantially in the manner and for the purpose shown and described.

WILLIAM JOINT.

Witnesses:

J. L. NEWTON,
R. F. NAYLOR.