

(No Model.)

2 Sheets—Sheet 1.

A. L. F. & J. R. MITCHELL.

SOLE AND HEEL BURNISHING MACHINE.

No. 292,033.

Patented Jan. 15, 1884.

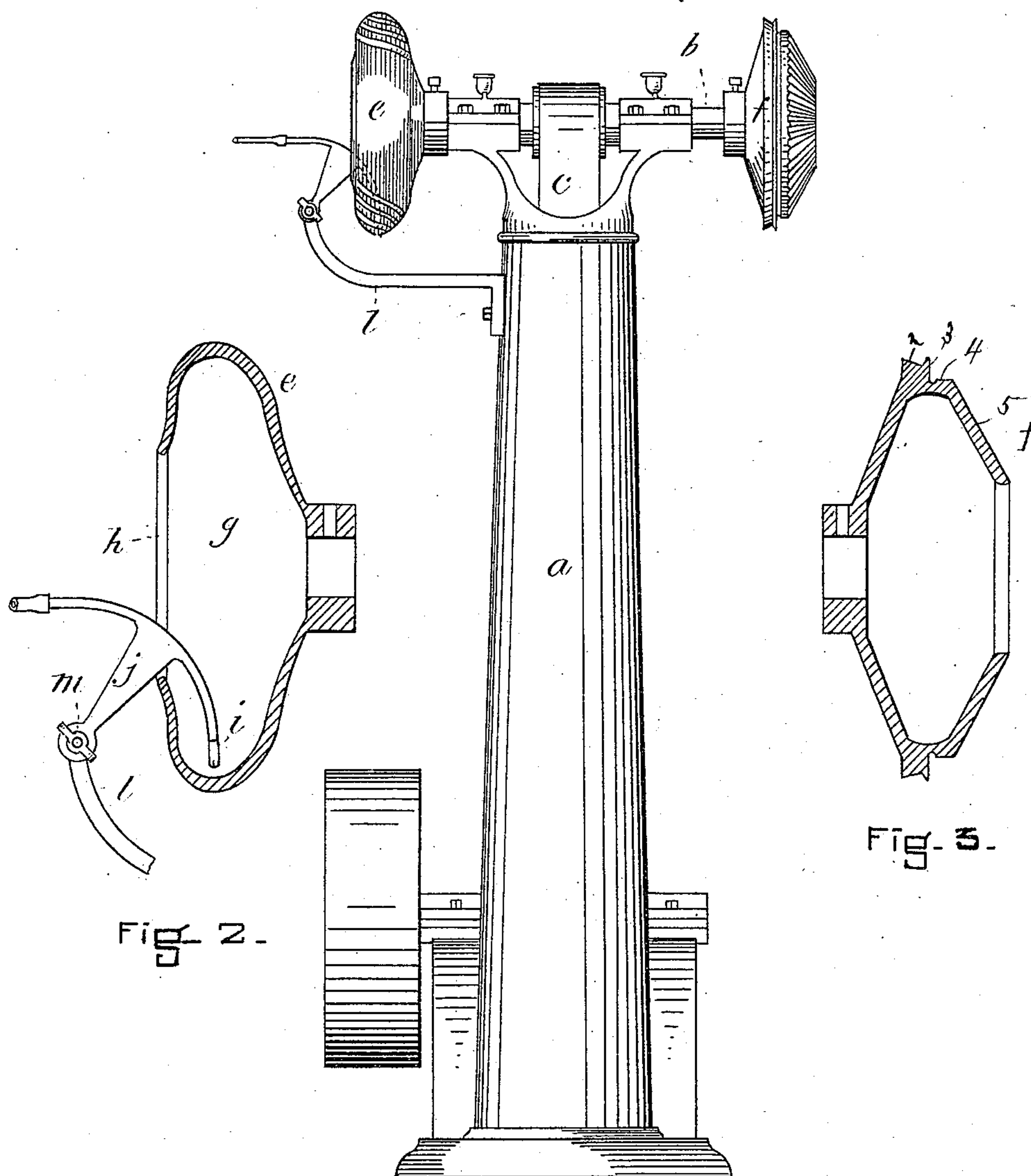


Fig. 2.

Fig. 3.

Fig. 1.

WITNESSES

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A. L. F. Mitchell  
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by Wright & Brown  
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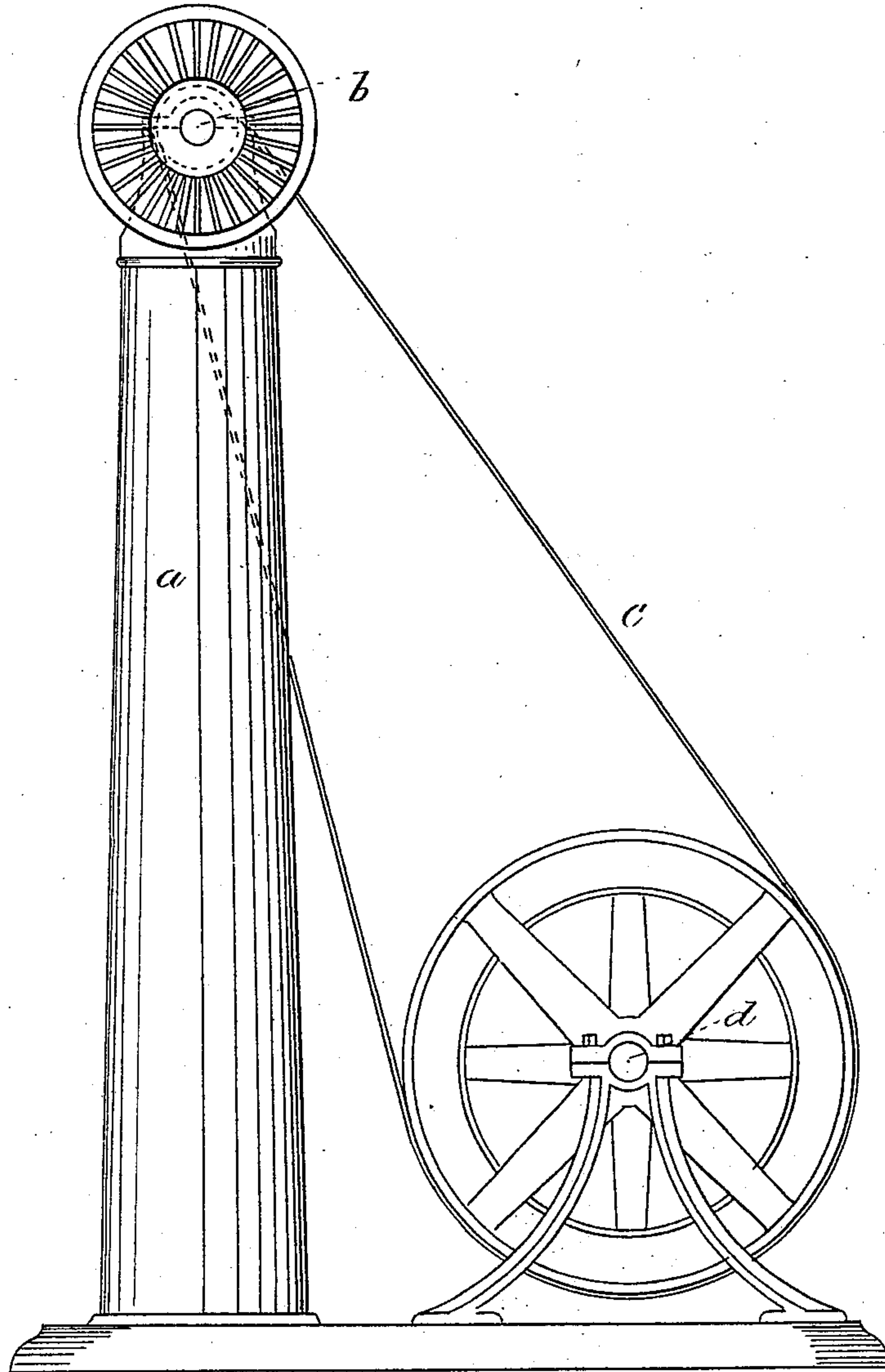


FIG. 4.

WITNESSES

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# UNITED STATES PATENT OFFICE.

ALBION L. F. MITCHELL, OF LAWRENCE, AND JAMES R. MITCHELL, OF  
DANVERS, MASSACHUSETTS.

## SOLE AND HEEL BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 292,033, dated January 15, 1884.

Application filed August 21, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, ALBION L. F. MITCHELL, of Lawrence, county of Essex, and State of Massachusetts, and JAMES R. MITCHELL, of Danvers, in the county of Essex and State of Massachusetts, have invented certain Improvements in Sole and Heel Edge Burnishing Machines, of which the following is a specification.

This invention has for its object to provide an improved machine for burnishing or setting the edges of boot and shoe soles and heels; and it consists in certain details of construction, which we will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a front elevation of a machine embodying our improvement. Figs. 2 and 3 represent sectional views of the burnishing-tools shown in Fig. 1. Fig. 4 represents an end elevation of the machine.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a supporting-standard having bearings in which is journaled a horizontal arbor, *b*, driven by a belt, *c*, running from a driving-shaft, *d*.

*e f* represent burnishing-tools affixed to the opposite ends of said arbor. The tool *e* has its periphery curved in cross-section, so as to approximately fit the vertical curvature of a heel, while the tool *f* has a series of peripheral divisions or surfaces, 2 3 4 5, which adapt it to different parts of the edge of the heel or sole. Each tool is made with an interior chamber, *g*, and a central opening, *h*, communicating with said chamber, said opening being in line with the axis of the tool. Within the chamber *g* of each tool is a burner, *i*, for gas or other suitable fuel, supported by an arm or bracket, *j*, passing through the opening *h*. The burner *i* is adapted to direct its flame against the portion of the wall of the chamber *g* which forms the inner surface of the burnishing portion of the tool. The tool is thus heated, and there is no deposit of products of combustion on the burnishing-surface, as there would be if the flame were applied directly to said surface. The bracket *j* is preferably secured to a fixed arm, *l*, by a thumb-screw, *m*. By loosening said screw the bracket

may be loosened and adjusted so as to vary the position of the burner, and locate it nearer to or farther from the surface of the tool against which the flame is directed, thus enabling the heat of the tool to be regulated.

Although we have shown but one burner, and that applied to the tool *e*, it will be understood that the tool *f* is to have a similar burner.

The periphery of the tool *e* is preferably corrugated or fluted to increase its burnishing effect.

The surfaces 2 3 4 of the tool *f* may be formed to fit any desired part of the sole or heel edge, as before stated. The surface 5, which is abruptly beveled, is provided with radial ribs or corrugations, and is adapted to burnish the tread-surface of the top lift.

We do not limit ourselves to the employment of any particular fuel; but we prefer gas as the most convenient. We have found that the rapid rotation of the tool causes the air to rush in and intensify the flame nearly as effectually as when a blower is employed for the same purpose.

We claim—

1. The combination, in an organized burnishing-machine, of the rotating hollow burner open at the front, and a swinging gas-burner mounted on a bracket, as described, so as to swing into the open end of the burner, substantially as and for the purposes set forth.

2. In an organized burnishing-machine, and in combination with a rotary shaft therein, driven by suitable mechanism, substantially as described, the burner described, having plane beveled surface 5, provided with radial ribs or corrugations, and adapted to burnish the tread of the heel, and having the molded surfaces 2 4, adapted to fit the contour and burnish the edge of the sole or heel, substantially as described.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, this 15th day of August, 1883.

ALBION L. F. MITCHELL.  
JAMES R. MITCHELL.

Witnesses:

WILLIAM E. FESSENDEN,  
CHARLES L. FESSENDEN.