C. H. HELMS.

SOLE-EDGE BURNISHING-MACHINE.

No. 173,284. Patented Feb. 8, 1876.

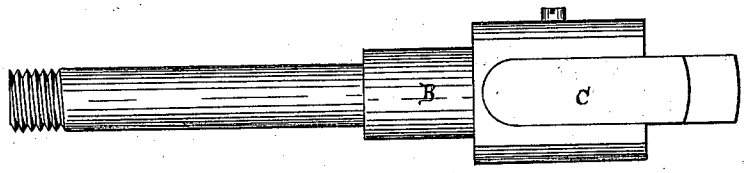

Fig. 4.

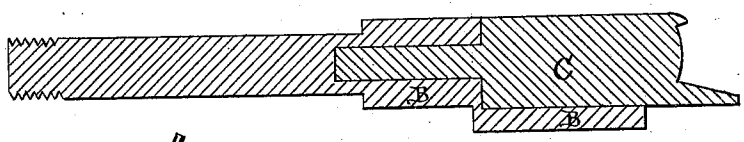

Fig. 3.

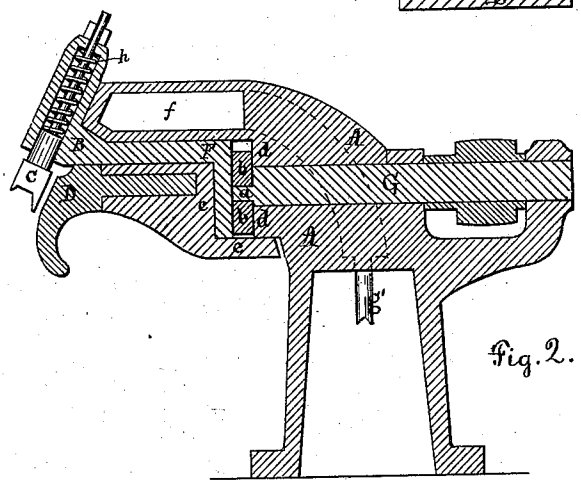

Fig. 2.

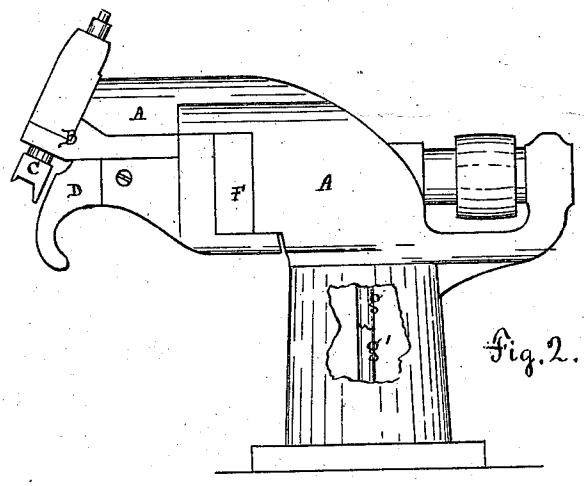

Fig. 2.

Chas. F. Sleeper.
J. E. Knox.

Charles H. Helms
by J. E. Maynadier
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UNITED STATES PATENT OFFICE.

CHARLES H. HELMS, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN SOLE-EDGE-BURNISHING MACHINES.

Specification forming part of Letters Patent No. **173,284**, dated February 8, 1876; application filed December 7, 1875.

To all whom it may concern:

Be it known that I, CHARLES H. HELMS, of Poughkeepsie, in the State of New York, have invented an Improved Edge-Setter, of which the following is a specification, reference being had to the accompanying drawings making a part hereof.

My machine is extremely simple, and consists of a head or standard carrying a tool-holder, holding a tool for setting or burnishing the edges of the soles of boots and shoes, and a finger-rest to aid the workman in holding the edge up to the tool, and the face of the sole against the rest, which is just below the burnishing part of the tool.

The drawings represent the best form of my machine, A being the head, B the tool-holder, C the tool, and D the finger-rest. The tool-holder B is fast to a slide, F, which is reciprocated by an eccentric pin, *a*, on the shaft G. This pin, to prevent wear, is journaled in the small slide *b*, which reciprocates in a slot in the slide F. This slide F is mounted in ways formed by the parts *c* and *d* of the head, as shown in the drawings. The part *c* of the head is in practice made adjustable so that it can be pressed closely against the vertical portions of the slide F. The finger-rest D is a hooked-shaped piece secured to the head near the tool, as shown in the drawings. For convenience it is mounted upon a tang, which is held by a set-screw. It should be mode of some non-conductor of heat, or else be wrapped with some non-conducting wrapper. The tool is heated by means of steam, which enters the upper part of the head by means of pipes *g g'*, one an inlet the other an outlet pipe. The head is cored out for this purpose, as indicated in the drawings, *f* being the steam-space. Steam is not essential, as the friction of the tool heats it considerably, but is desirable for the best work. The tool-holder is backed up by a spring, *h*. The tool may be in one piece, with a tang which fits the holder, or may be secured in a proper socket at the lower part of this tang. In practice the latter mode is used, as shown in Figs 3 and 4.

The operation is as follows: The workman holds the shoe firmly in his hands, and thus presents the edge to be burnished to the tool, which reciprocates with great rapidity—about one thousand eight hundred times per minute, I find, gives the best results. The workman passes the edge up against the tool, and the face of the sole against the surface which projects below the tool, and gradually moves the shoe so as to bring all parts of the edge to its action, steadying the shoe by the aid of the finger-rest D, especially when burnishing the corners of the toes. A little experience is necessary to enable the workman to use the machine to great advantage, but a skilled workman can do a very large quantity of work second to none in quality.

The combination of the finger-rest D with the burnishing-tool, and the rest for the face of the sole, is the main feature of my invention. All the other points of novelty in my machine also relate to new combinations of old elements.

What I claim as my invention is—

1. In combination with the burnishing-tool and the rest for the face of the sole, the finger-rest D, substantially as described.

2. The combination of the finger-rest D, the burnishing-tool, and the elastic tool-holder B, as set forth.

3. The burnishing-tool, its holder B, slide F, ways *c* and *d*, shaft G, and pin *a*, all combined together as specified.

CHARLES H. HELMS.

Witnesses:

ALLISON BUTTS,

CLARENCE VAIL.