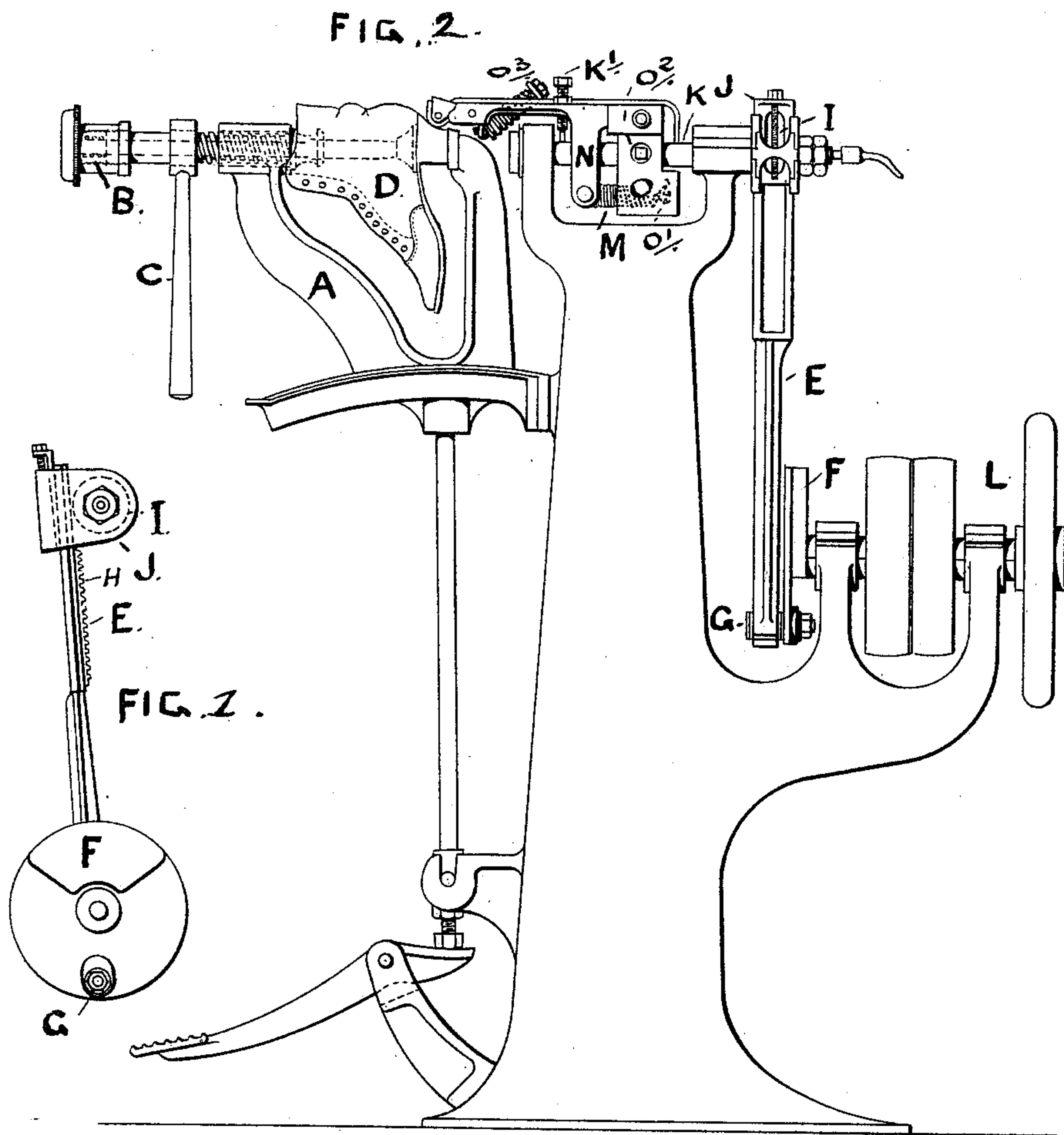


(No Model.)

J. M., J., A. J. & S. A. GIMSON.
HEEL BURNISHING MACHINE.

No. 415,340.

Patented Nov. 19, 1889.



INVENTORS.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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ENGLAND.

HEEL-BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 415,340, dated November 19, 1889.

Application filed January 10, 1889. Serial No. 296,032. (No model.) Patented in England May 17, 1888, No. 7,304.

To all whom it may concern:

Be it known that we, JOSIAH MENTOR GIMSON, JOSIAH GIMSON, ARTHUR JAMES GIMSON, and SYDNEY ANSELL GIMSON, engineers, all of the firm of GIMSON & Co., of the Vulcan Engineering Works, Vulcan Street, Leicester, in the county of Leicester, England, in the United Kingdom of Great Britain and Ireland, have invented certain Improvements in and relating to Machines for Polishing or Burnishing the Heels of Boots and Shoes, or for automatically finishing the heels of boots or shoes in the manner hereinafter described.

Letters Patent have been granted to us in Great Britain for such improvements on our application dated the 17th day of May, 1888, No. 7,304, of which the following is a specification.

Our invention refers to improvements in and relating to machines for polishing or burnishing the heels of boots and shoes, in which we obtain a perfect, noiseless, and regular oscillating movement to the rubbing or burnishing block by the employment of a vertical straight rack fitting in a rocking guide, and gearing with a pinion on the outer end of the burnishing-shaft—that is to say, the pinion is carried at the opposite end of the burnishing-shaft to the rubbing-block—and to afford facilities for the proper tensioning of the rubbing-block to the various-shaped heels to be operated upon, so that an even polish is given to all parts of the heel alike: We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the machine or contrivance for imparting the oscillating motion to the burnishing-shaft. Fig. 2 is a side view, in elevation, of the entire machine as constructed in accordance with our invention.

The construction of the pillar and bracket of the machine we do not claim, for it has been commonly employed in America in conjunction with a sector or quadrant to operate the burnishing-shaft in automatic heel-burnishing machines.

The improvements herein specified are carried out in the following manner: A worm-bracket A is provided in the top of the sliding frame, into which is fitted the screwed jack B. This is moved by operating the handle C so that the inner end of the jack will

securely hold the boot D to the buffer, as shown in Fig. 2. The oscillating movement to the burnishing-shaft and heated tool is obtained by the aid of the vertical rack-bar E, secured to the crank-disk F by the pin G, the teeth H of the rack gearing with the pinion I, riding with the rocking guide J on the free end of the shaft K, motion being imparted by a belt being passed over the driving-pulley on the driving-shaft. The motion is steadied by the fly-wheel L on the outer end of the driving-shaft. The tensioning contrivances consist of a circular or conical steel spring M, attached to the compensating forked lever N, the inner end of which is secured at O' in the block O. This is secured to the shaft by the screw O². The burnisher carried in front of the lever N is tensioned also by the circular spring O³, so that no matter at what angle the heel is the tool is always held to its work. The tool is secured to the shaft K by the screw K'.

We are aware that prior to our invention machines for burnishing sole-edges and also heels have used a straight rack—such as Lambert's patent, No. 120,112, of 1872—but this non-automatic arrangement we do not claim; also, in Beasley's patent, No. 141,984, of 1873, a straight rack is used, but which does not act directly upon the burnishing device.

What we claim, in an automatic heel-burnishing machine of the character shown and described, and wish to secure by Letters Patent, is—

In a heel-burnishing machine of the character shown and described, the combination of the vertical rack-bar E and pinion I with the rocking guide J, fitted on the free end of the burnishing-shaft K, the spring M, compensating forked lever N, and burnisher-spring O³, in conjunction with the screwed jack B, operated by the handle C, all for the purpose substantially as set forth.

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