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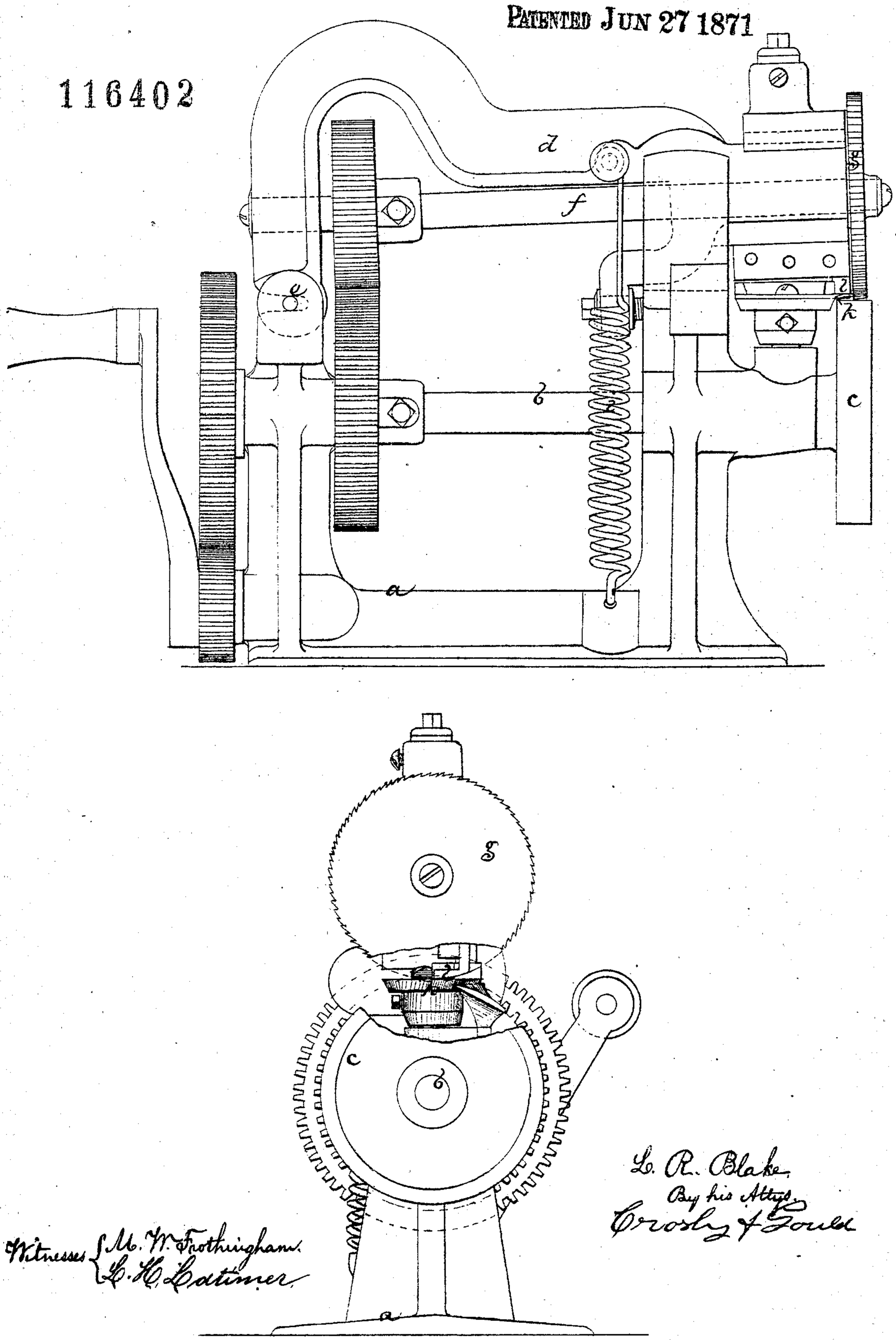
PATENTED JUN 27 1871



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UNITED STATES PATENT OFFICE.

LYMAN R. BLAKE, OF FORT WAYNE, INDIANA.

IMPROVEMENT IN FEATHER-EDGING AND CHANNELING MACHINES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. 116,402, dated June 27, 1871.

To all whom it may concern:

Be it known that I, LYMAN R. BLAKE, of Fort Wayne, in Allen county, State of Indiana, have invented an Improvement in Feather-Edging and Channeling Machines; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In feather-edging and channeling machines for preparing boot and shoe soles for the reception of the stitches by which they are united to "uppers," and in which feed-wheels and an edge-guide are used to feed and properly present the sole to the action of the knife or knives, (such machines being generally known as McKay channelers,) it is customary to have one wheel smooth (peripherally) and one with peripheral teeth or serrations, (the smooth wheel acting against the smooth side of the sole, and the toothed or serrated wheel against the flesh or rough side thereof,) and to fasten the cutter or cutters to the movable arm in which is journaled the shaft of the upper roll, the cutter or cutters being so formed and arranged as to enter the same surface of the sole above which the cutting mechanism is attached.

In soles thus channeled or feather-edged the cut is always regulated from the upper and movable wheel, or from the wheel attached to the arm which carries the cutter, so that an edge of uniform thickness, or a channel the bottom of which is at a uniform distance from the opposite surface of the sole, cannot be produced, because the cutting mechanism follows the irregularity (in thickness) of the sole. In sewing "turns," however, it is indispensable to good work that the edge should be of uniform thickness, or the bottom of the channel at a uniform distance from the uncut surface.

In my improvement I effect this by attaching the cutter to that arm or part of the frame in which the smooth feed-wheel shaft is journaled, but in such manner that it cuts upon the side of the sole opposite that upon which such wheel acts, so that, while the cutter has a constant or definite and uniform relation to the smooth surface of the sole against the smooth feed-wheel, the cut is made from or into the opposite or flesh side of the sole.

It is in the organization of a channeling or feather-edging machine with the cutter attached to the arm or part of the frame carrying the smooth wheel, but arranged to act against or from the surface of the sole opposite that surface on which such wheel acts, that my improvement consists.

The drawing represents, in side elevation and in end view, a machine embodying my invention.

a shows the stationary frame, in which is journaled the shaft *b*, carrying at its front end the smooth feed-wheel *c*. *d* is the movable arm, pivoted at *e* to the rear stand of the frame *a*. *f* is the upper shaft, journaled in said arm, and carrying at its front end the toothed or serrated feed-wheel *g*. The sole to be prepared is passed between the two feed-wheels *c g*, its smooth side against the lower smooth-surfaced wheel *c*, the arm *d* being forced down to pinch the sole between the wheels and insure its feed by the stress of a spring, *i*. *k* denotes the cutter, having a shank fastened to or with relation to the frame *a* or with relation to the smooth wheel. The cutter is so made that, notwithstanding it is fixed relatively to the periphery of the wheel or the path of movement of such periphery, the sole passes between it and the said wheel, and the cutting-edge cuts upon the surface opposite to that against which the smooth wheel acts, but always at a uniform distance from the said wheel. *l* denotes the edge-guide.

It will be obvious that the same result may be attained by making the upper wheel the smooth wheel and the lower one the toothed or serrated wheel, and attaching the cutter-shank to the movable arm, the cutter being so formed that the sole passes between it and the smooth wheel, or the wheel at the end of the shaft journaled in the arm to which the cutter is attached, the result being the same in either case, namely, a provision for preparing the sole with an edge of uniform thickness, or with a gash or channel the bottom of which is uniformly distant from the smooth surface of the sole.

I claim—

In combination with feed-wheels and an edge-guide, a cutter fixed to that frame or arm in which the shaft of one wheel is journaled, and acting on the side of the sole opposite that upon which such wheel acts.

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Witnesses:

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