

(No Model.)

2 Sheets—Sheet 1.

L. COTÉ.

LASTING MACHINE FOR BOOTS OR SHOES.

No. 270,282.

Patented Jan. 9, 1883.

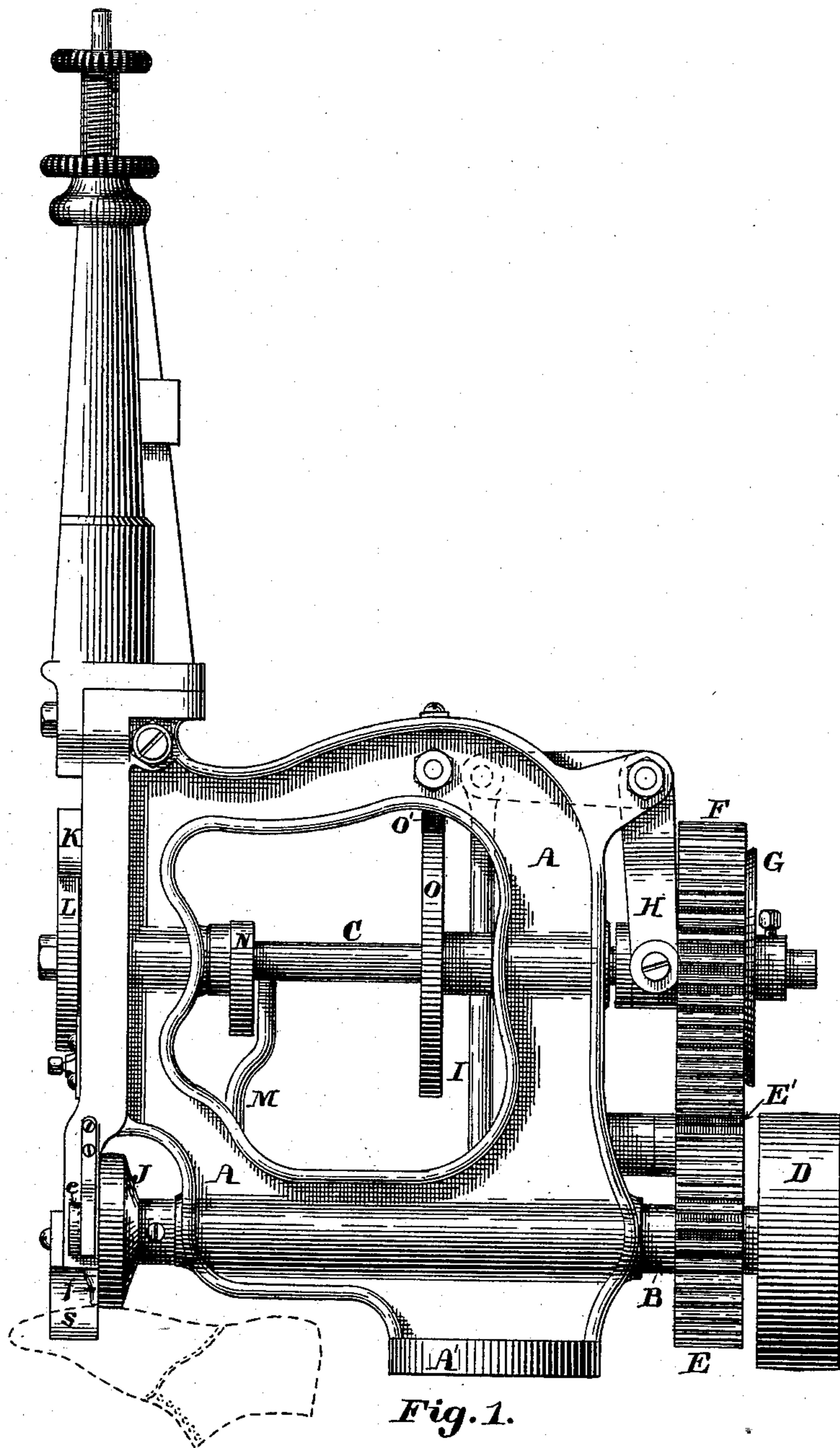


Fig. 1.

Witnesses:

Walter E. Lombard
Thomas Hibbard

Inventor:

Louis Côté,
by N. C. Lombard
Attorney.

(No Model.)

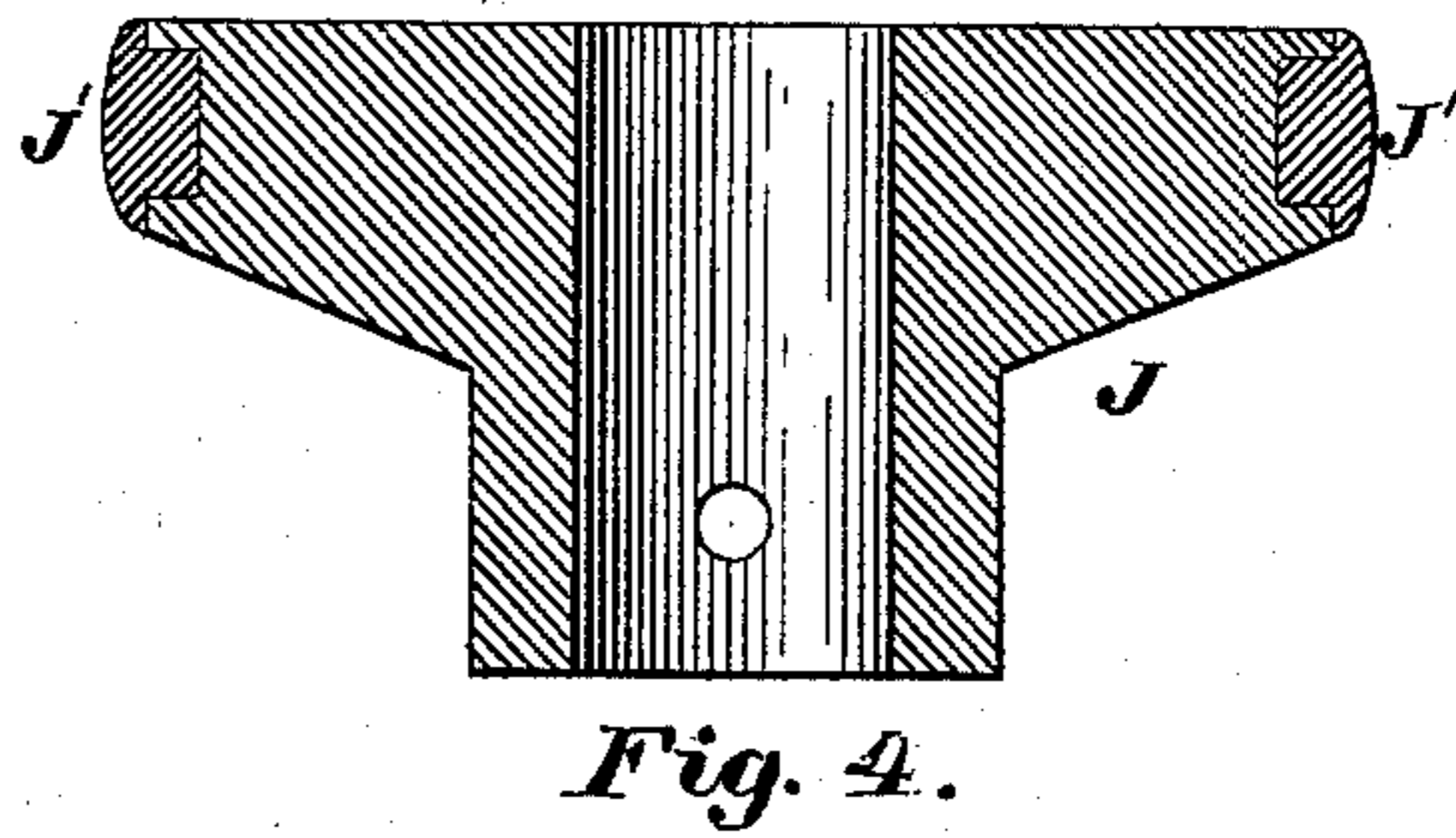
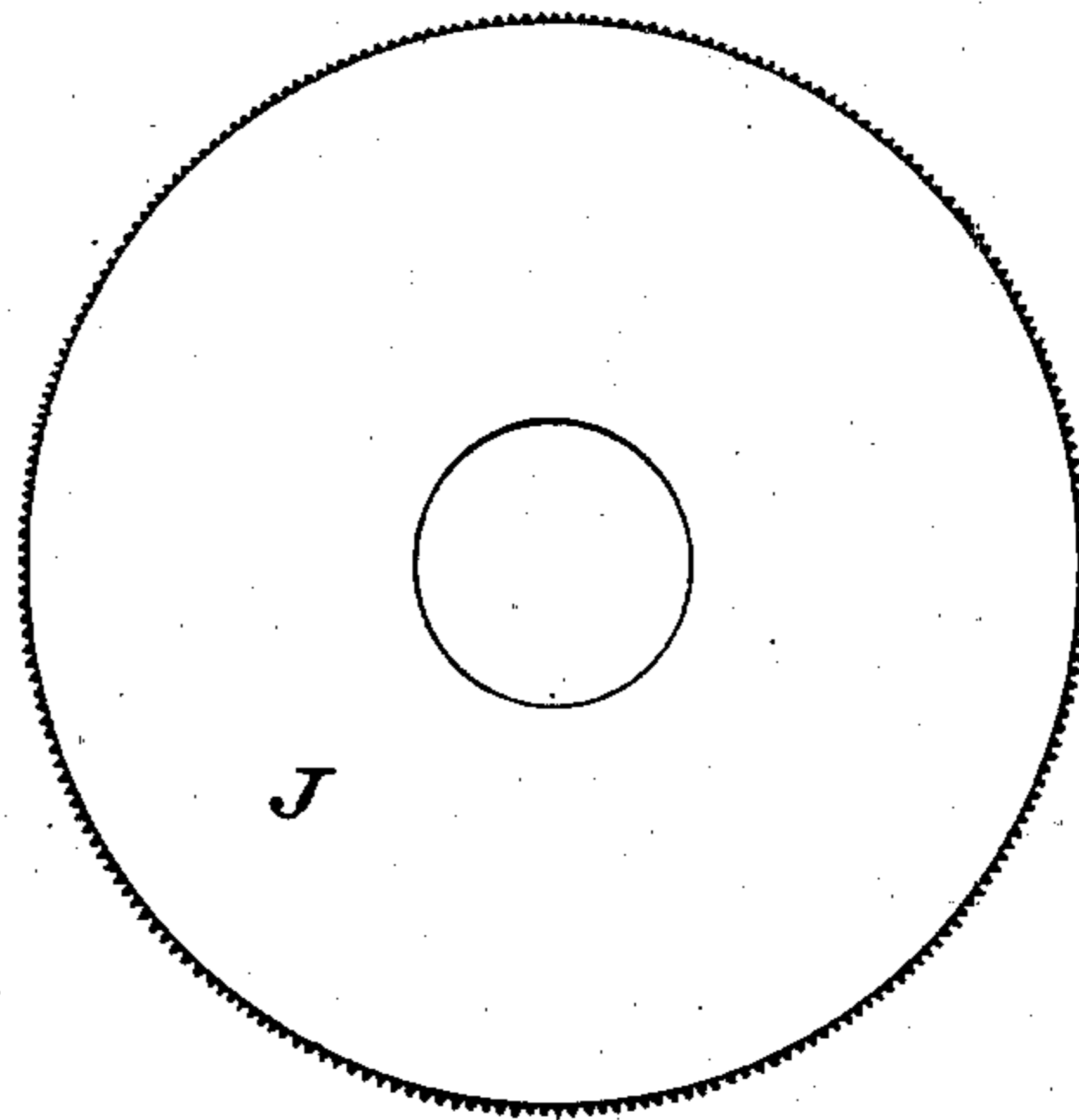
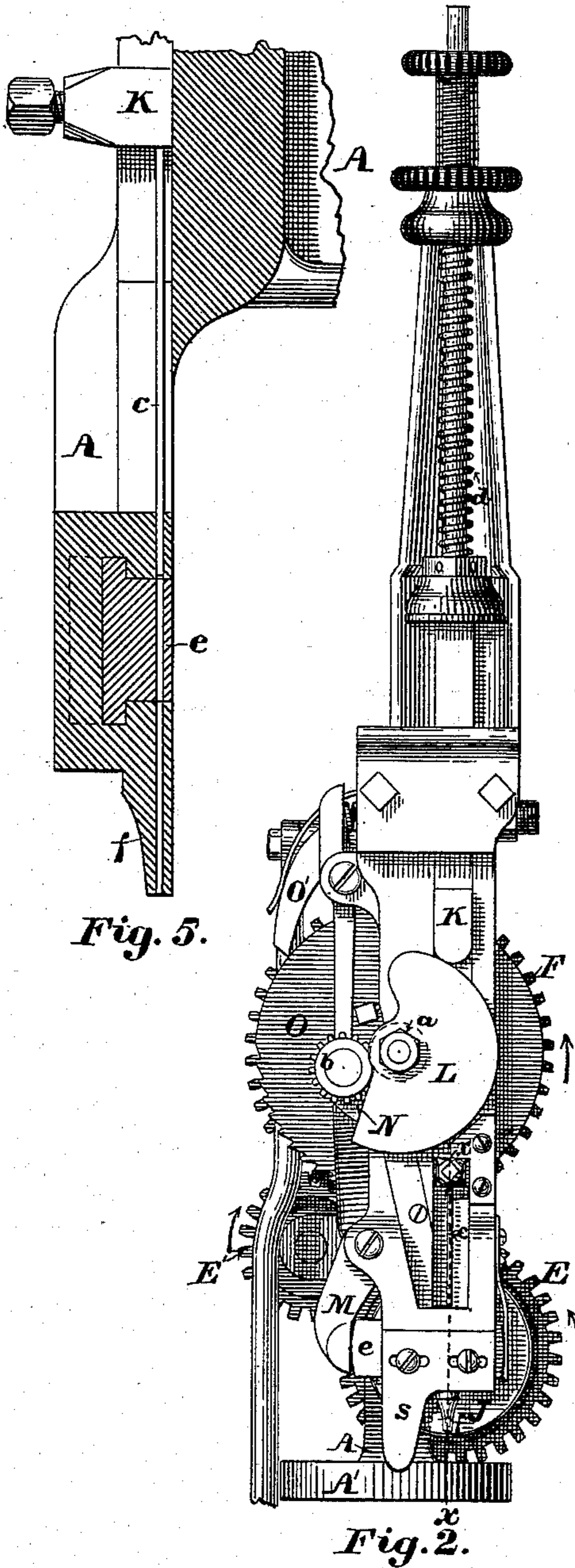
2 Sheets—Sheet 2.

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LASTING MACHINE FOR BOOTS OR SHOES.

No. 270,282.

Patented Jan. 9, 1883.



Witnesses:
Walter E. Lombard.
Thomas Ribbard

Inventor:
Louis Côté,
by N. C. Lombard
Attorney.

UNITED STATES PATENT OFFICE.

LOUIS COTÉ, OF ST. HYACINTHE, QUEBEC, CANADA.

LASTING-MACHINE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 270,282, dated January 9, 1883.

Application filed September 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, LOUIS COTÉ, of St. Hyacinthe, in the county of St. Hyacinthe and Province of Quebec, Canada, have invented certain new and useful Improvements in Lasting Boots and Shoes and Machinery therefor, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to an improved process of lasting boots and shoes and to mechanical devices for applying said process, and has for its object a more complete and perfect fitting of the upper to the last in all its parts, with a very material reduction in the cost of the mechanical devices for automatically stretching and securing the upper upon the last as compared with the lasting-machines now in use; and it consists, first, in the use, in a lasting-machine, of a revolving wheel having a peripheral surface adapted by roughening or otherwise to act by frictional contact upon and carry along with its surface a shoe-upper when pressed thereto, in combination with mechanism for imparting to said wheel a continuous rotary motion in one direction and an automatic nail-driving mechanism.

It further consists in the combination of a wheel having its periphery roughened or otherwise adapted to act by frictional contact upon and stretch the upper upon the last when presented thereto, mechanism for imparting to said wheel a continuous rotary motion in one direction, a nail-driving mechanism, and mechanism for intermittently throwing the nail-driving mechanism into and out of action at the will of the operator without affecting the revolution of the wheel.

Figure 1 of the drawings is a side elevation of a machine embodying my invention. Fig. 2 is a front end elevation of the same. Fig. 3 is a front elevation of the roughened frictional wheel for straining the upper over and pressing it upon the inner sole. Fig. 4 is a section through the axis of a frictional wheel of a modified construction, and Fig. 5 is a partial vertical section on line *x x* on Fig. 2.

A is the frame of the machine, constructed and adapted to be secured by its flange A' to a bench or column, and having mounted in

suitable bearings formed therein the shafts B and C. The shaft B has firmly secured upon its rear end the driving-pulley D and the spur-gear wheel E, which meshes into and imparts motion to the gear E', which in turn meshes into and imparts motion to the spur-gear wheel F, mounted loosely upon the shaft C, and constructed and arranged to intermittently engage with the conical wheel G, firmly secured upon said shaft C, so as to be compelled to revolve with it. The gear-wheel F is arranged to have a slight endwise movement upon the shaft C, and is moved into and out of engagement with the wheel G by means of the forked elbow-lever H, the rod I, and a treadle and spring attached thereto. (Not shown in the drawings.)

J is a roughened metallic wheel, firmly secured upon the front end of the shaft B, with its front radial face in close proximity to the path of the nail-driver. This wheel may be made of metal, as above described, with its peripheral surface roughened, as shown in Fig. 3; or it may have its periphery grooved to receive a hoop or band of rubber, J', as shown in Fig. 4, without departing from the principles of my invention.

The remaining parts of the machine illustrated in the drawings are well-known devices, which go to make up a machine adapted to feed a wire vertically a short distance at stated intervals, cut from said wire pieces of a given or determined length, and drive them into any object held firmly beneath the nose of the machine, and hence they will be only briefly referred to here.

Near the front end of the shaft C is secured thereto a feed-roll (shown in dotted lines at *a* in Fig. 2) having teeth upon its periphery, which engage with corresponding teeth upon the roll *b*, mounted in movable bearings, and arranged to be intermittently moved toward and from the roll *a*, and made to grip the wire for a longer or shorter interval to determine the length of nail to be cut by mechanism not shown in the drawings, but in common use and well known.

K is the driving-bar; *c*, the driver; L, the cam for lifting the driver-bar; *d*, the spring for throwing the driver-bar down after it has

been raised; *e*, the cutting-off die; *M*, the lever, and *N* the cam for operating the cutting-off die; *O*, a ratchet-disk, and *O'* a pawl co-operating therewith to serve as a stop for the nailing device.

It is obvious that any other kind of nailing-machine than the one shown and described may be combined with my improved frictional lasting-roll without affecting the principles of my invention.

The machine shown and described is designed to be used by the operator holding the shoe or boot to be lasted in the desired position beneath the wheel *J* and the nose *f* of the machine; but a jack for holding the shoe may be used, if desired.

The operation of my invention is as follows: The boot or shoe upper is placed upon the last in the desired position, and secured thereon in the usual way, by a tack at the heel and another at the toe, after the leather has been strained in the direction of the length of the last and the toe of the upper has been turned down upon the inner sole. The operator then takes the last with the upper thereon in both hands, with the tread-surface of the last upward, and presents it to the under surface of the wheel *J*, which is moving toward the front of the machine, as indicated by the arrow, and pressing the tread-surface of the last upward till the section of the upper in contact with said wheel is pressed hard upon the inner sole, and is drawn tight to the last by the frictional action of said wheel thereon, and the side or end of the last comes in contact with the gages, when the operator places his foot upon the treadle connected with the shipper-lever *H* and depresses it, so as to cause the gear-wheel *F* to engage with the clutch-cone *G*, and thus cause the shaft *C* to make a single revolution, which cuts and drives a nail to secure the portion of the upper strained and turned over upon the inner sole, the operator removing his foot from the treadle as soon as the nail is driven, when the operation of the nailing devices ceases till the treadle is again depressed.

The operator then moves the shoe along a short distance and repeats the operation, and so continues till the shoe is completely lasted, the work being performed step by step or section by section, the operation in that respect being somewhat analogous to the operation of lasting boots and shoes by hand.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a machine for lasting boots and shoes, a wheel having its periphery roughened or otherwise adapted, substantially as set forth, to act by friction upon and stretch the upper upon the last when presented thereto, in combination with mechanism for imparting to said wheel a continuous rotary motion in one direction and an automatic nail-driving mechanism, substantially as described.

2. In a machine for lasting boots and shoes, the combination of a wheel having its periphery roughened or otherwise adapted, substantially as set forth, to act by frictional contact upon and stretch the upper upon the last when presented thereto, mechanism for imparting to said wheel a continuous rotary motion in one direction, a nail-driving mechanism, and a mechanism for intermittently throwing the nail-driving mechanism into and out of action at will without affecting the revolution of the wheel, substantially as described.

3. The combination of the frictional wheel *J*, the shaft *B*, the shaft *C*, a nail-driving mechanism operated by said shaft *C*, a train of gearing connecting the shafts *B* and *C*, a clutch, and shipping mechanism for intermittently throwing the nailing mechanism into and out of action, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of September, A. D. 1882.

LOUIS COTÉ.

Witnesses:

WALTER E. LOMBARD,
HERBERT E. LOMBARD.