

No. 733,974.

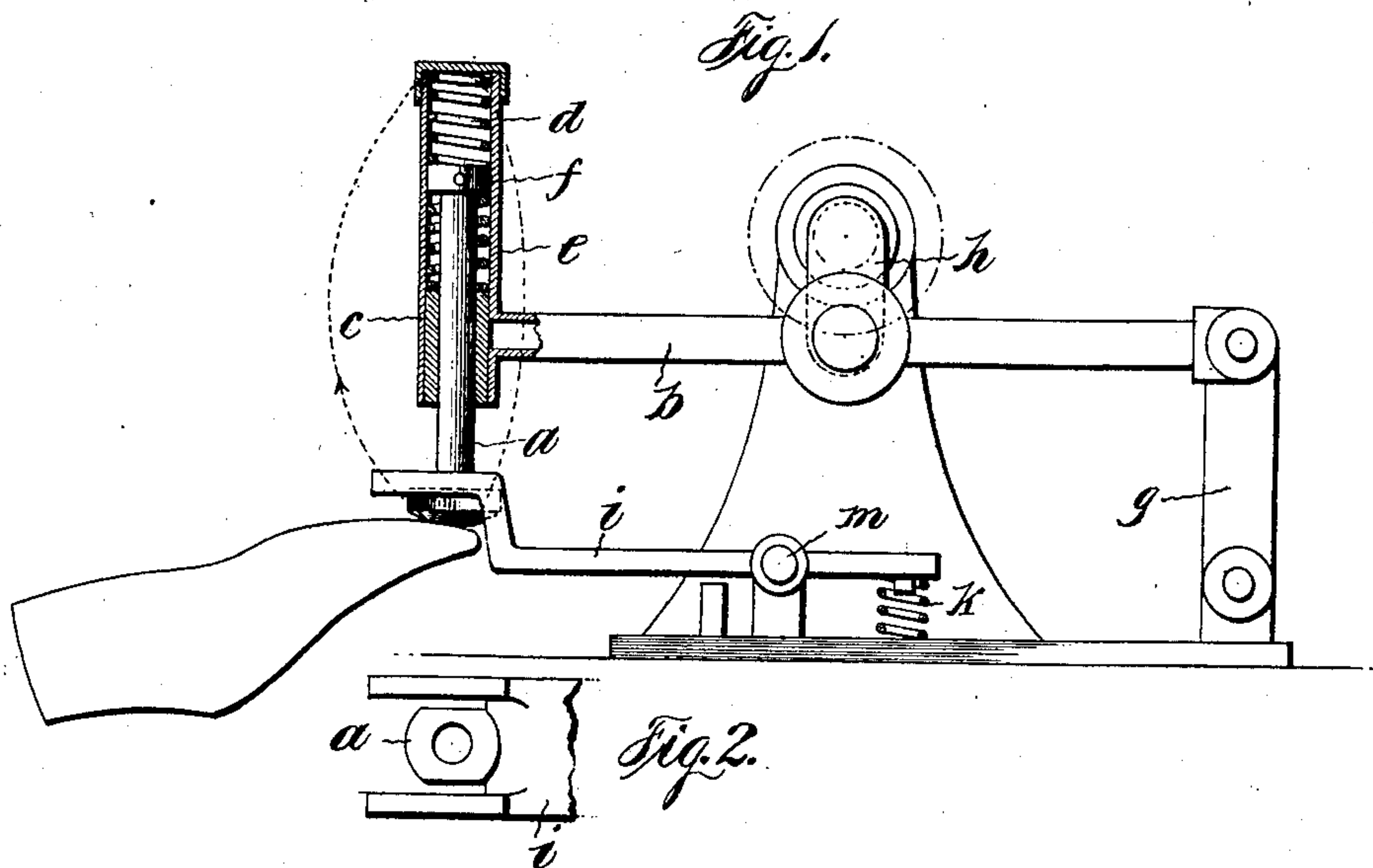
PATENTED JULY 21, 1903

G. KRON.

MECHANICAL HAMMERING DEVICE FOR USE IN THE MANUFACTURE OF
BOOTS OR SHOES.

APPLICATION FILED SEPT. 20, 1901.

NO MODEL.



Witnesses:
B. Ober.
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UNITED STATES PATENT OFFICE.

GEORG KRON, OF MALMÖ, SWEDEN.

MECHANICAL HAMMERING DEVICE FOR USE IN THE MANUFACTURE OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 733,974, dated July 21, 1903.

Application filed September 20, 1901. Serial No. 75,835. (No model.)

To all whom it may concern:

Be it known that I, GEORG KRON, a subject of the Emperor of Germany, residing at Malmö, Sweden, have invented an Improved Mechanical Hammering Device for Use in the Manufacture of Boots, Shoes, or the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has for its object a mechanically-actuated hammer for use in shoe-making and which is especially suitable for beating the upper after the pegging operation has taken place in order that it may fit perfectly smoothly on the welt or insole of the shoe or boot. In this operation it is necessary for the hammer to strike from the edge of the sole toward the center of the same, so that the shape of the shoe may not suffer, as would be the case were the striking to take place vertically. In order to obtain this slanting blow, the striking mechanism is guided in a curved course by means of a suitable link-gear, the lower oblique part of this course being utilized as the striking-point. The edge of the sole is held against the striking-tool and gradually guided all around it, the weight of the last affording sufficient resistance to the comparatively light and rapidly-working hammer or striker, so that a firm support of the last is not necessary.

Referring to the drawings, in which like parts are similarly designated, Figure 1 shows one form of construction of the hammer; and Fig. 2, the prongs of the contact-piece *i*, with the striking mechanism between them.

The striking mechanism *a* is mounted in a guide *c*, closed at the upper end and arranged on the free end of the striker-arm *b*, and is held by means of two springs *d* and *e*, which bear against a piston *f* on the striker, and thus afford an elastic support to the same. The piston or collar *f* may also be constructed so as to form an air-piston in order to increase the spring action. The other end of the

striker-arm is guided in an arc by means of a link *g*, while a point in the center of the striker-arm is carried around in a circle by means of a crank *h*. The striker-tool thus describes approximately the curve which is shown in dotted lines in Fig. 1.

In order that the striker may always encounter the edge of the sole at a uniform distance away, a forked contact-piece *i* is pivoted on a bolt *m*, along which contact-piece the edge of the sole is moved. The regulation of the strength of stroke takes place by the last being pressed more or less strongly against the prongs of the contact-piece *i*, as the latter, whose forward end is pressed downward by the spring *k*, yields when the last is pressed upward and allows the last to approach the striking-point, and consequently increases the striking action.

Having thus described my said invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a machine of the class described, the combination with an arm, a hammer carried thereby, a crank connected to the arm and means to cause said hammer to travel in substantially an elliptical path; of a forked lever, the fork thereof embracing the hammer, and means for causing a downward pressure on the forked end of the lever, substantially as set forth.

2. In a machine of the class described, the combination with an arm, a guide carried on one end thereof, a hammer, spring and air cushioned in the guide, a crank connected to the arm intermediate its ends, and means pivotally connected to the other end of the arm to cause the hammer to travel in a substantially elliptical path; of a pivoted lever having a fork at one end and a spring pressing against the other end to cause a downward pressure on the fork, substantially as set forth.

3. In a machine of the class described, the combination with an arm, a guide closed at one end and carried at one end of said arm, a piston in the guide, a hammer secured to and a spring on each side of the piston to spring and air cushion the piston and hammer, a link pivoted at one end to a fixed ele-

ment and at the other to the other end of said
arm; of a lever pivoted intermediate its ends,
a fork on one end of the lever surrounding
the hammer, and a spring acting against the
5 end of the lever to cause a downward pres-
sure on the fork, substantially as set forth.
In testimony that I claim the foregoing as

my invention I have signed my name in pres-
ence of two subscribing witnesses.

GEORG KRON.

Witnesses:

N. GUST. ABERZ,

A. W. ANDERSON.