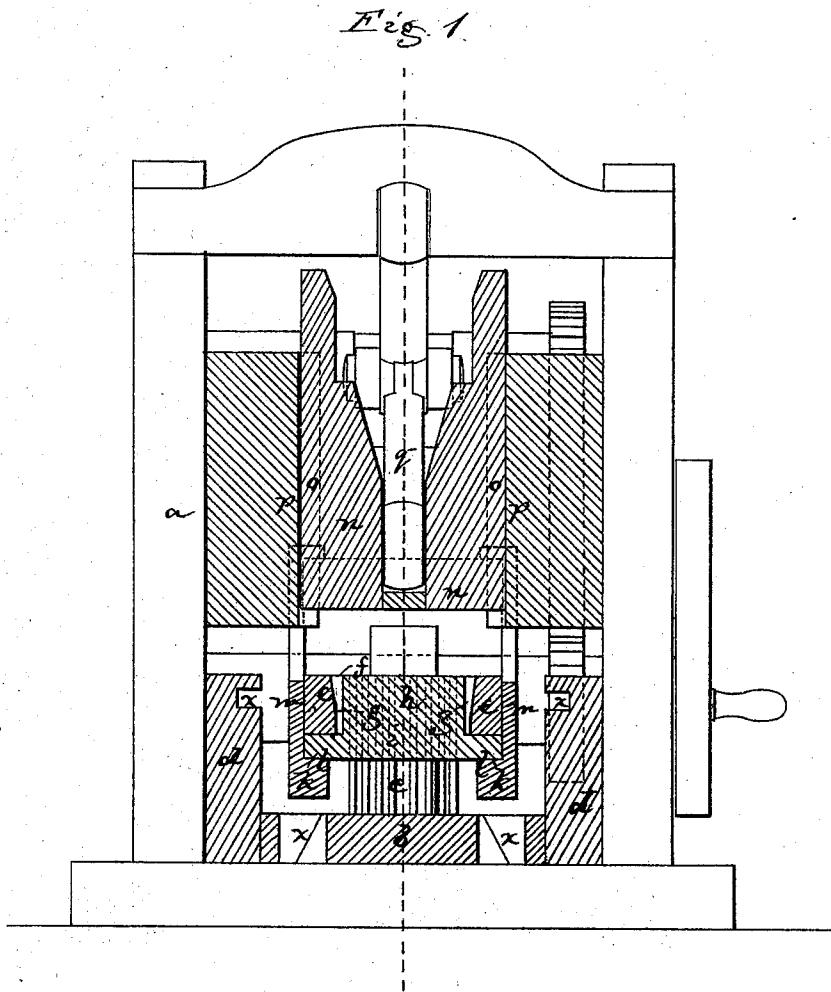


R. C. LAMBART.

Machines for Compressing and Punching Heel-Blanks.

No. 143,914.

Patented Oct. 21, 1873.



Witnesses.
H. W. Frothingham.
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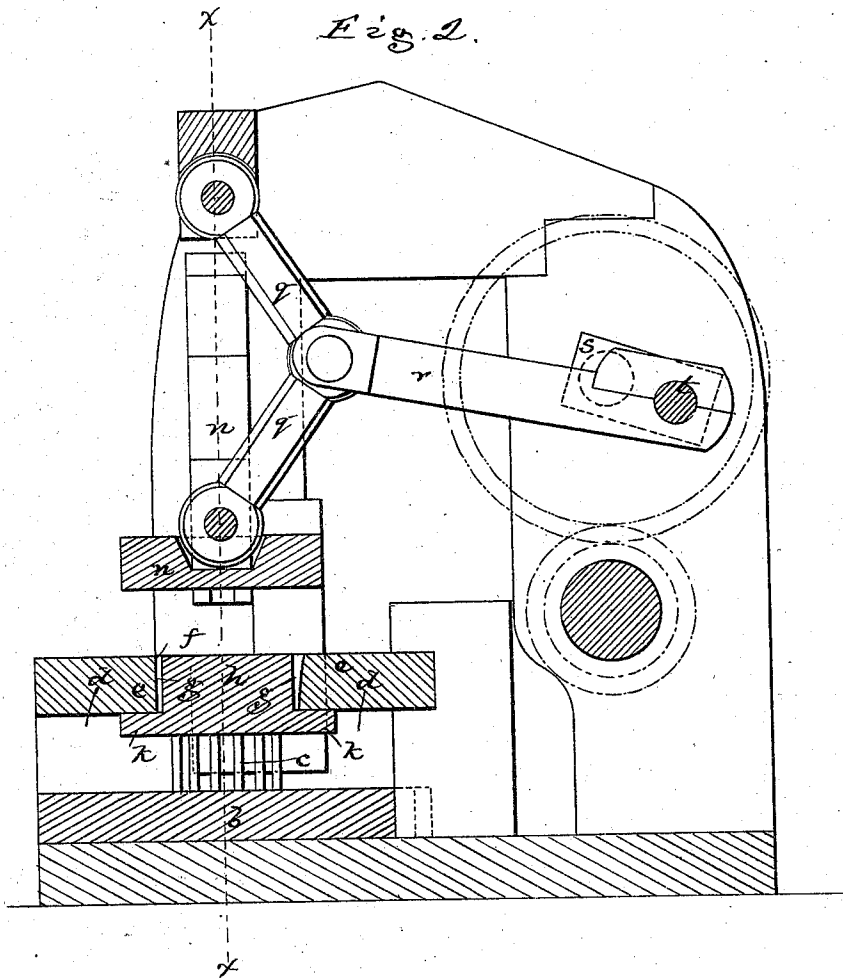
Inventor
Richard C. Lambart.
By his Attys.
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UNITED STATES PATENT OFFICE.

RICHARD C. LAMBART, OF QUINCY, MASSACHUSETTS, ASSIGNOR TO THE
SHOE-MACHINERY MANUFACTURING COMPANY.

IMPROVEMENT IN MACHINES FOR COMPRESSING AND PUNCHING HEEL-BLANKS.

Specification forming part of Letters Patent No. **143,914**, dated October 21, 1873; application filed
September 25, 1873.

To all whom it may concern:

Be it known that I, RICHARD C. LAMBART, of Quincy, in the county of Norfolk and State of Massachusetts, have invented an Improved Machine for Compressing and Punching Heel-Blanks; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

The invention has particular reference to the arrangement of mechanism of a machine for pricking nail-holes in assembled lifts for boot and shoe heels, and compressing said lifts.

In my machine I employ a stationary block, to which are fixed and from which extend upward vertical awls. Over these awls is a stripper-plate, having holes corresponding to the awls, and through which the awls extend when the plate is pressed down. This plate is encompassed, in its normal position, by a stationary die-plate, the die-opening in which is of heel shape with flaring sides. Over the die-plate and stripper is a flat-faced follower, moving in vertical guides, and connected by toggle-levers or links with a crank-shaft, so that by turning the crank the follower is reciprocated vertically.

The heel-blank to be shaped, compressed, and punched, is laid upon the stripper-plate, the upper surface of which is flush with the upper surface of the die-plate, and the follower, being then thrown down, presses the blank down into the die, the stripper-plate yielding under the pressure of the follower. The tips of the awls are situated at considerable distance below the top of the die-plate, and as the lifts are pressed into the die they are not only compacted, but, by the tapering form of the die, are compressed laterally; and as the blank continues to move down under pressure the awls puncture the holes for reception of the nails by which the heel is to be united to the sole of a boot or shoe. When the follower rises, lifters connected therewith raise the stripper-plate, and push the punched and compressed blank from the awls.

It is in the specific arrangement of the mech-

anism embraced in the organization thus generally described that my invention consists.

The drawing represents a machine embodying my invention.

Figure 1 shows the machine in sectional elevation on the line *xx* of Fig. 2, the latter figure showing a vertical central section of the machine.

a denotes a frame, upon the bed of which is placed the awl block or plate *b*, the awls *c* projecting up from this plate. Over the plate *b*, and supported upon suitable uprights *d*, is the die-plate *e*, in which is the die-opening *f* for receiving the assembled lifts or heel blanks, the lifts being preferably slightly secured together by one or more tacks. This die is made with the sides *g* flaring, the flare being principally in the upper part of the die. Within this die is the stripper-plate *h*, in which are made the holes *i* for reception of the awls *c*. This plate has a flange, *k*, supported on shoulders *l*, extending from vertical rods or lifters *m*, which lifters extend from a follower, *n*. The follower has vertical slides *o* moving in guides *p*, and connected by toggle-links *q*, and a link, *r*, with a crank, *s*, on a shaft, *t*, rotation of the shaft imparting reciprocating vertical movement to the follower.

The blank being placed in the die, is compressed, compacted laterally, or from the edges, and punched by the awls to form the nail-holes, and is stripped from the awls, all as before set forth.

To change the awl-plate, die-plate, and stripper-plate for various sizes of heels, the plates *e b* may slide in and out by guides *x*, the plate *h* moving with them.

I claim—

The die-plate *e*, having the flared receptacle *f*, awl-plate *b*, stripper-plate *h*, and follower *n*, when combined and arranged to operate substantially as shown and described.

Executed this 27th day of August, A. D. 1873.

R. C. LAMBART.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.