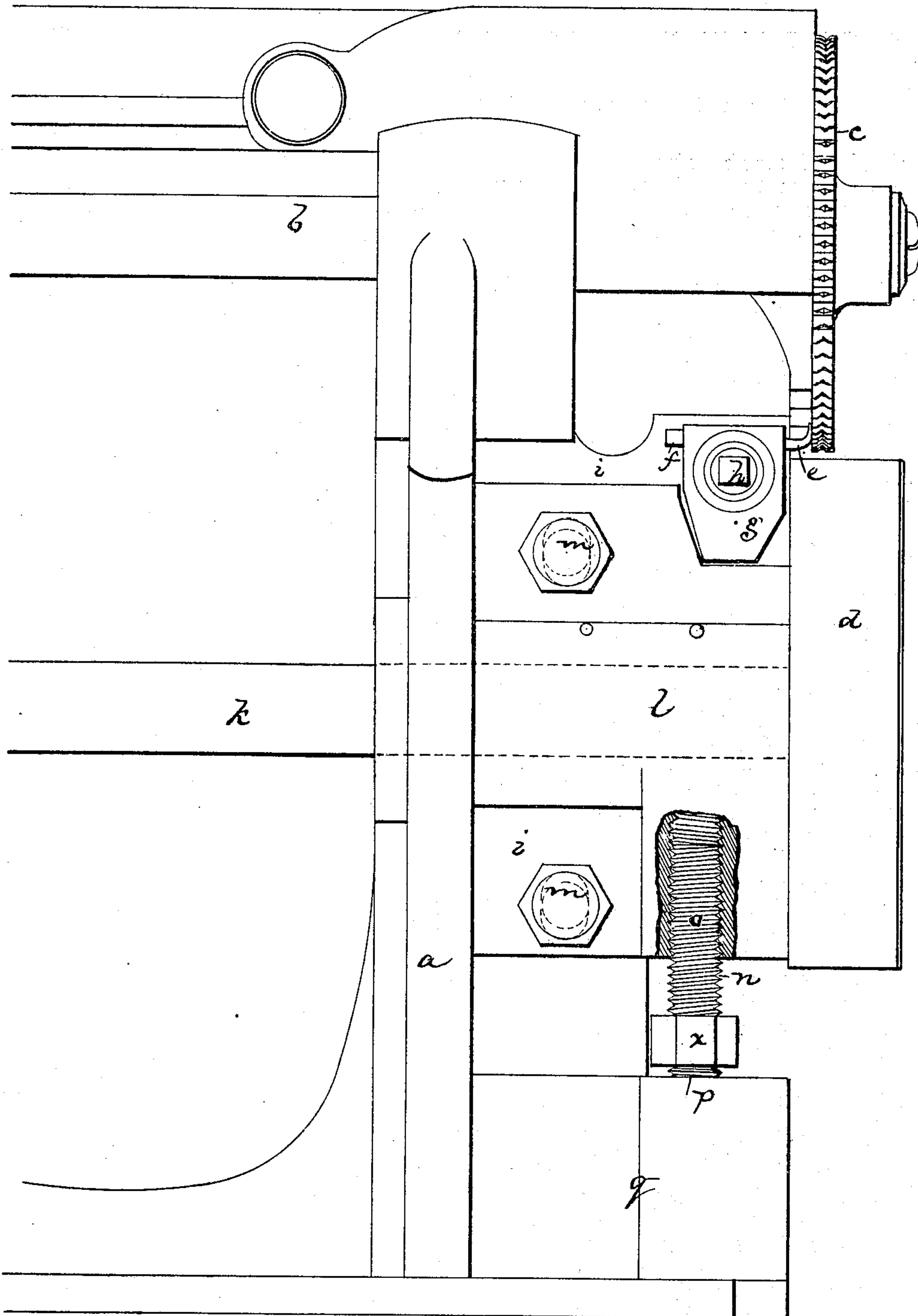


E. P. PIERCE.

Improvement in Boot and Shoe Sole Channeling-Machines.

No. 129,588.

Patented July 16, 1872.



Witnesses.
W. W. Frothingham.
J. B. Kidder.

Inventor.
Edward P. Pierce.
By his Atty.
Crosby & Gould

UNITED STATES PATENT OFFICE.

EDWARD P. PIERCE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BOOT AND SHOE SOLE-CHANNELING MACHINES.

Specification forming part of Letters Patent No. 129,588, dated July 16, 1872.

To all whom it may concern:

Be it known that I, EDWARD P. PIERCE, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Machines for Edge-Channeling or Feather-Edging Boot and Shoe Soles; 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.

The invention relates particularly to that class of machines known as feather-edging or channeling machines for chamfering the edges of soles, (to be used in the manufacture of "turns," in which the inner surface of each sole is generally made with a straight or nearly straight cut or gash at some distance from the edge of the sole, dipping down toward said edge, and thereby forming a flap and channel, at the bottom of which the stitches enter, and with a channeled or chamfered edge. In order to insure a uniformity of distance of the stitches from the outer surface of the sole at the edge, the edge channel or chamfer must be cut to such depth as to leave an edge of uniform thickness, the bottom of the cut being not uniformly distant from the surface into which the knife enters, but uniformly distant from the opposite or outer smooth or wearing surface of the sole; and to insure such uniformity the cutter is attached to that part of the frame in which is journaled the shaft of the smooth feed-roll, that runs against said outer surface, but acts upon the opposite surface of the sole, the sole passing between said wheel and the cutting-edge. In my invention the lower roll is the smooth feed-roll, and the cutter-shank is attached to the stationary part of the frame, in which the shaft of said roll is journaled, and to adjustably regulate the depth of cut I make the journal-box of said roll movable vertically with relation to the cutter, with provision for adjusting its position to increase or decrease the distance of the top of the roll from the cutter. It is in this construction or provision for adjustment that my invention consists, or in the combination, with a cutter fixed to the frame, through which extends the shaft, of the lower smooth feed-roll, the edge of said cutter entering the surface opposite to that resting upon said roll, and with the movable arm carrying the shaft of the upper serrated feed-

roll of a lower smooth feed-wheel, which is made adjustable vertically with relation to the stationary cutter.

The drawing represents, in side elevation, the front end or head of a machine embodying the invention.

a denotes the stationary frame; *b*, the movable arm, pivoted to the rear end of said frame, said arm carrying the shaft upon which is fixed the upper and peripherally-toothed or serrated feed-roll *c*; said feed-roll being drawn down toward the lower smooth roll *d* and against the sole, passing between the two rolls to be channeled by the stress of a suitable spring. *e* denotes the cutter at the end of a shank, *f*, which, by a clamp-plate, *g*, and screw-bolt *h*, is fastened to the vertical cheek *i*, which extends up from the frame or bed *a*; said cutter being stationary. The smooth feed-roll *d* is fixed on the end of a rotary shaft, *k*, and said shaft is journaled in a bearing, *l*, which is made movable vertically, the inner face resting against the cheek *i*, and the bearing being confined, except as to vertical movements, by screw-bolts *m* passing through slots in the bearing into the cheek *i*. Under the bearing, and working in a nut-thread extending up into the bearing, is an adjusting-screw, *w*, which is provided with a wrench-head, *x*, and by turning this screw the bearing *l*, shaft *k*, and wheel *d* are raised or lowered to adjust the position of the wheel *d* with relation to the cutter *e*.

The screw may have a right thread, *o*, and a left thread, *p*, one working into the bearing *l* and the other into an extension, *q*, of the bed *a*.

By means of this provision for movement of the wheel the depth of cut of the cutter may be very quickly and easily changed and regulated without disturbance of any of the mechanism except the feed-wheel shaft and its journal-box.

I claim—

In combination with the upper serrated or toothed wheel *c*, and with the stationary cutter *e* fixed to the bed or frame *a*, the lower smooth feed-wheel *d*, having its shaft *k* journaled in a vertically-adjustable bearing, *l*, substantially as shown and described.

EDWARD P. PIERCE.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.