

(No Model.)

2 Sheets—Sheet 1.

A. J. JOHNSON.
HEEL TRIMMING MACHINE.

No. 261,094.

Patented July 11, 1882.

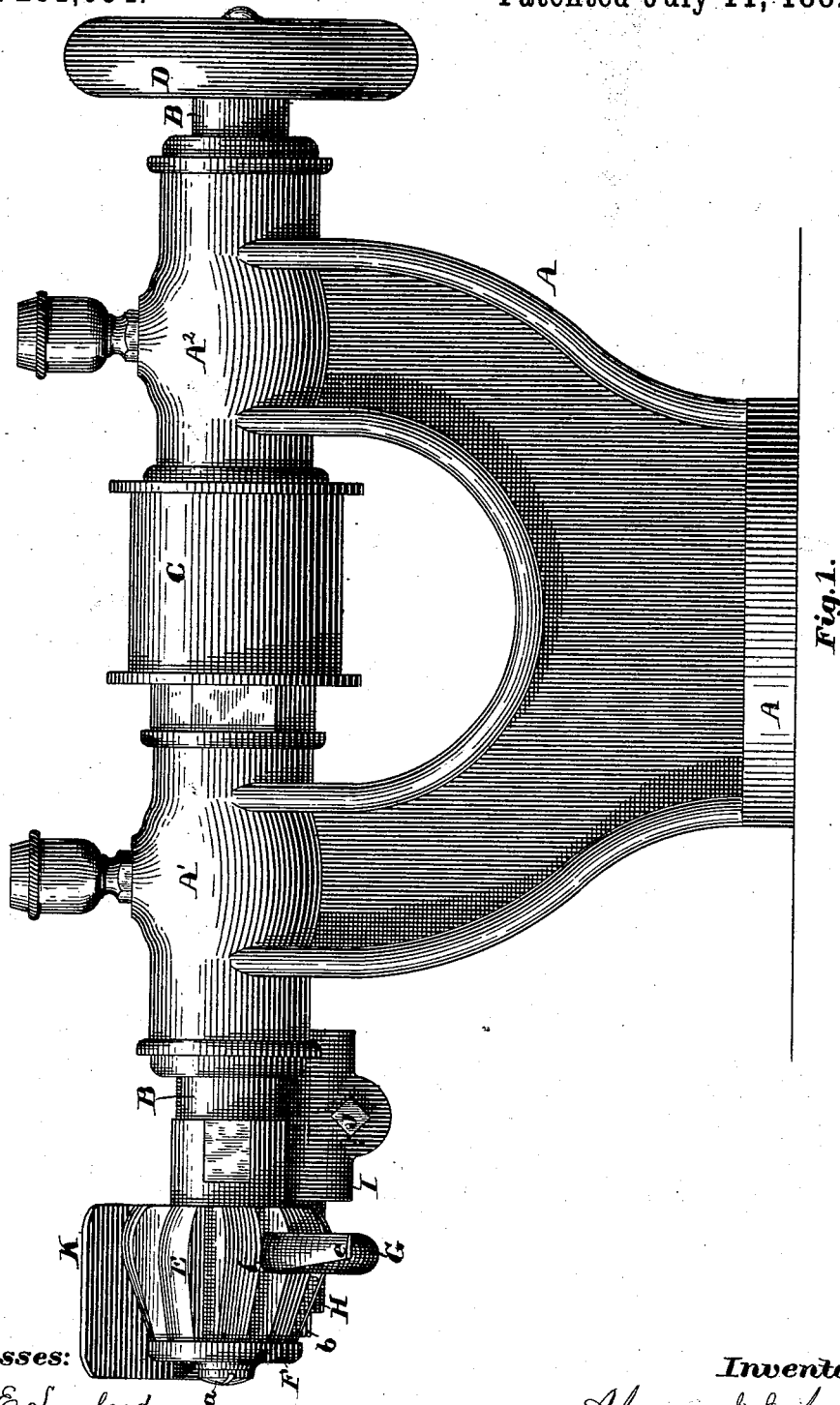


Fig. 1.

Witnesses:

Walter E. Lombard.
E. A. Hemmenway.

Inventor:

Almeron J. Johnson
by N. L. Lombard
Attorney.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

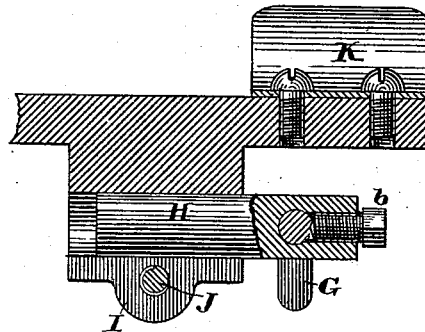


Fig. 3.

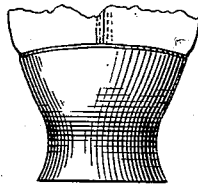


Fig. 6.

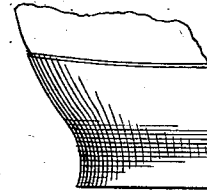


Fig. 5.

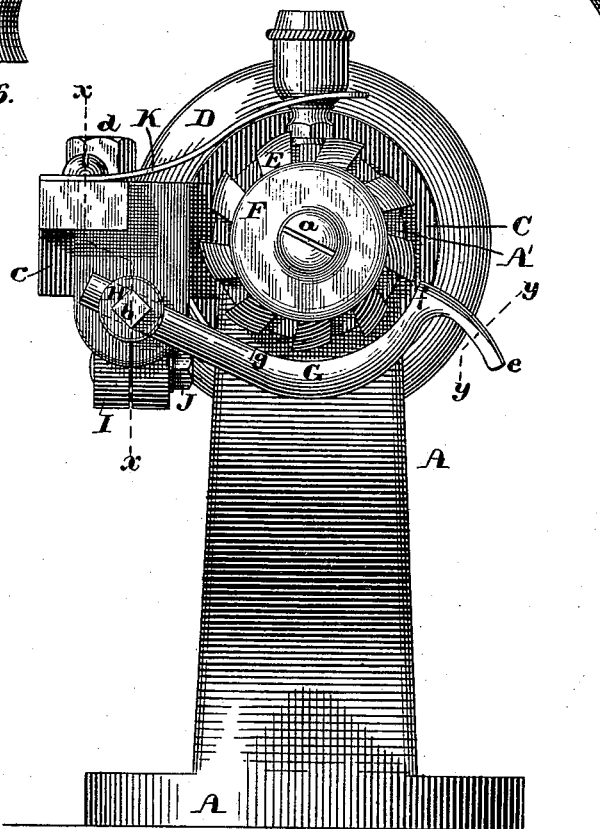


Fig. 2.

Witnesses:
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E. A. Hemmenway.

Inventor:
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UNITED STATES PATENT OFFICE.

ALMERON J. JOHNSON, OF ROCHESTER, NEW YORK.

HEEL-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 261,094, dated July 11, 1882.

Application filed May 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALMERON J. JOHNSON, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Machines for Trimming the Edges of Boot and Shoe Heels, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of heel-trimming machines in which a rotary cutter is used, and is an improvement upon the machine described in Letters Patent No. 221,734, granted to me November 18, A. D. 1879; and it consists in a novel construction and arrangement of a combined guide and rest or support for holding the heel while being acted upon by the cutter, and in the combination of the same with a circular guard adapted to bear upon and protect the upper, which will be best understood by reference to the description of the drawings, and to the claims to be hereinafter given.

Figure 1 of the accompanying 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 partial vertical section on line *xx* on Fig. 2. Fig. 4 is a section of the rest on line *yy* on Fig. 2, and Figs. 5 and 6 are respectively a side elevation and an end elevation of a heel which my machine is adapted to trim.

A is the frame or head of the machine, adapted to be secured to a bench or a column, and having mounted in the bearings A' and A² the shaft B, provided with the driving-pulley C and hand-wheel D, and having screwed to its front end the many-bladed cutter E, the periphery of which is molded longitudinally to a curve the counterpart or reverse of the curve that it is desired to impart to the boot or shoe heel.

F is a circular guard, secured to the outer end of the cutter E by the screw *a* in such a manner as to revolve therewith and to press upon the upper at or above the heel-seat, according to the style of heel being cut and to the particular part of the heel being acted upon.

G is the combined guide and heel-rest of the peculiar shape shown, and adjustably secured in the rod H by the set-screw *b*, said rod H being in turn adjustably secured in the split

clamp I by means of the bolt J. The split clamp I is secured to an ear, *c*, on the rear of the frame A by means of the bolt *d*.

K is a shield or guard projecting over the cutter to prevent the chips from flying, and to protect the operator's hands.

The upper surface of the rest G from *e* to *f* is made convex in two directions and narrower at *e* than at *f*, as shown, to permit the proper presentation of the heel to the cutter without said guide-rest coming in contact with the shank of the shoe, and the rod H should be so set in the clamp I that the highest part of the transverse curve of said rest shall be exactly opposite the largest diameter of the cutter E, as shown in Fig. 1. The rest G should also be so adjusted in the rod H and said rod so turned in the clamp I that the concaved upper surface of said rest from *f* to *g* shall just clear the points of the cutter-blades, as shown in Fig. 2. The rest G, by virtue of its adjustability in the rod H and of the adjustability of the rod H longitudinally and circumferentially, may be adjusted to any desired size of cutter, and so that the corner *f* of said rest shall be in close proximity to the points of the cutter-blades, and thus support the heel near where the cutter is acting upon it. The rest G, when properly adjusted, and by virtue of its rounded upper surface fitting into the hollow of the curve of the heel, serves as a guide for directing and steadying the heel as it is rotated to present all parts of its edge to the action of the cutter.

By reference to Figs. 5 and 6 it will be seen that the distance from the deepest part of the hollow of the heel to the heel-seat is much greater at the rear of the heel than at the sides, and hence if the cutter is made the reverse of the curve at the rear of the heel, and the shoe is always held while being acted upon by the cutter so that the tread-surface of the heel shall be in line with the inner end of the cutter, as is necessary, the opposite end of the cutter will lap over or extend beyond the heel-seat, from which it will be seen that the guard F does not run in the rand of the shoe, but bears upon the upper at a varying distance from the heel-seat, the guiding of the heel being accomplished by the guide rest G and the skill of the operator.

The operation of my invention is as follows:

The cutter being revolved at a high rate of speed, the operator takes the shoe in his hand, and, resting the breast of the heel upon the upper portion of the surface *ef* of the rest G, presses the side of the heel against the cutting-blades till the circular guard F bears upon the upper in close proximity to the heel. He then gradually moves the toe of the shoe outward and upward, taking care to keep the tread-surface of the heel in line with the inner end of the cutter till the toe of the shoe is upward and the cutter has reached the opposite front corner of the heel, during which time the convex surface *ef* of the rest G fits into the concave side of the heel, and thus aids in guiding the heel properly to the cutter.

By the use of this peculiarly-shaped rest I am enabled to trim boot and shoe heels of any desired shape with much greater speed than when the shoe has to be jacked, and do equally good work, while the machine can be made for less money than any good serviceable heel-trimming machine heretofore in use that has come under my observation.

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

1. The combination of the cutter E and the guide-rest G, provided with the convex surface *ef*, and adjustable vertically, longitudinally, and laterally, substantially as and for the purposes described. 30

2. The combination of the cutter E, the guide-rest G, the rod H, the split clamp I, the bolt J, and the set-screw *b*, all constructed, arranged and adapted to operate substantially as and for the purposes specified. 35

3. The combination of the molded cutter E, the adjustable guide-rest G, and the circular guard F, arranged to rest upon the upper above the heel-seat and prevent the cutter injuring the upper, substantially as described. 40

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 5th day of May, A. D. 1882.

ALMERON J. JOHNSON.

Witnesses:

SETH H. TERRY,
B. J. MOSS.