

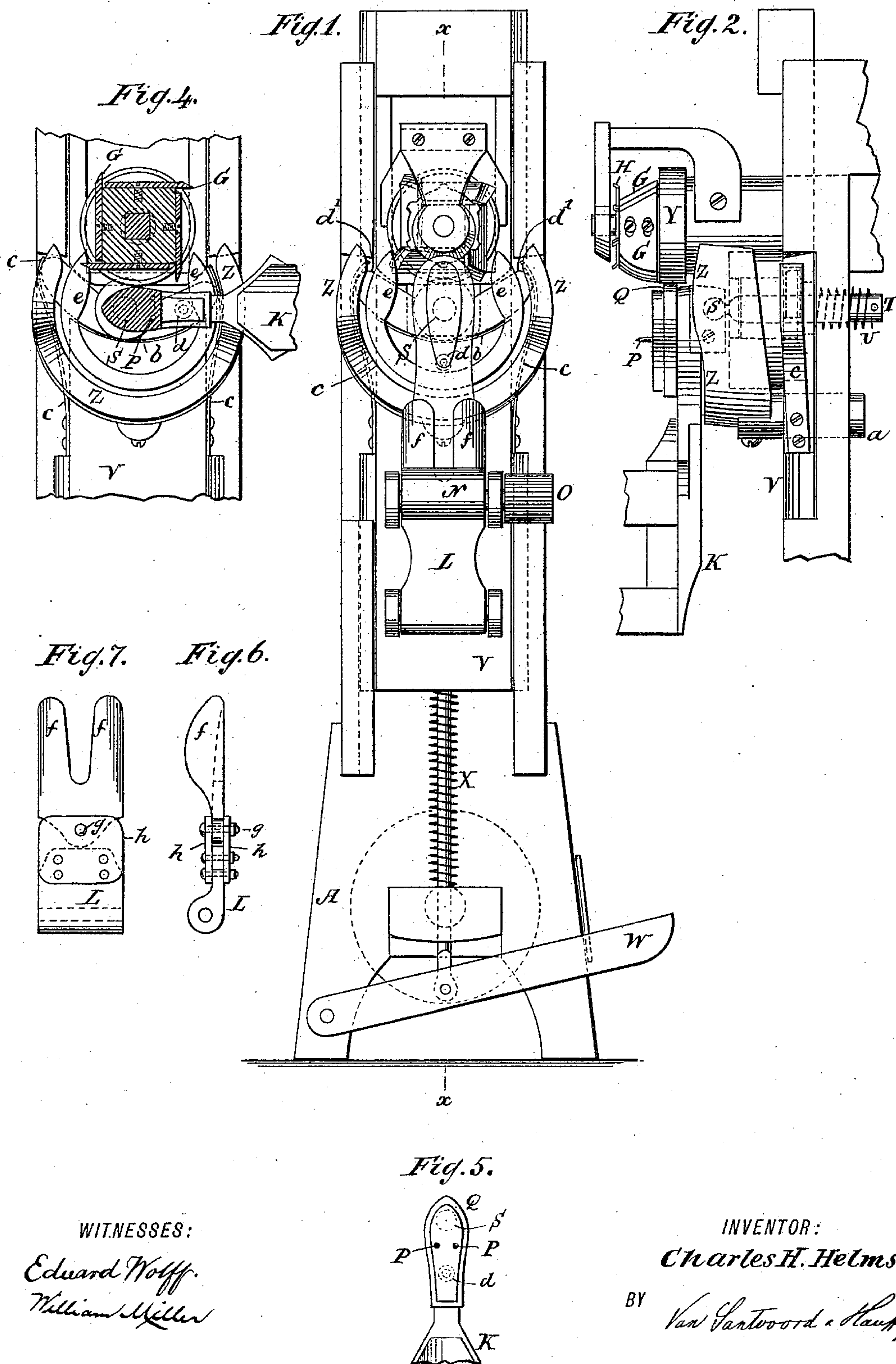
(No Model.)

2 Sheets—Sheet 1.

C. H. HELMS.
HEEL TRIMMER.

No. 397,001.

Patented Jan. 29, 1889.



WITNESSES:
Eduard Wolff.
William Miller

INVENTOR:
Charles H. Helms.

BY *Van Cartvoord & Haupt*

ATTORNEY

(No Model.)

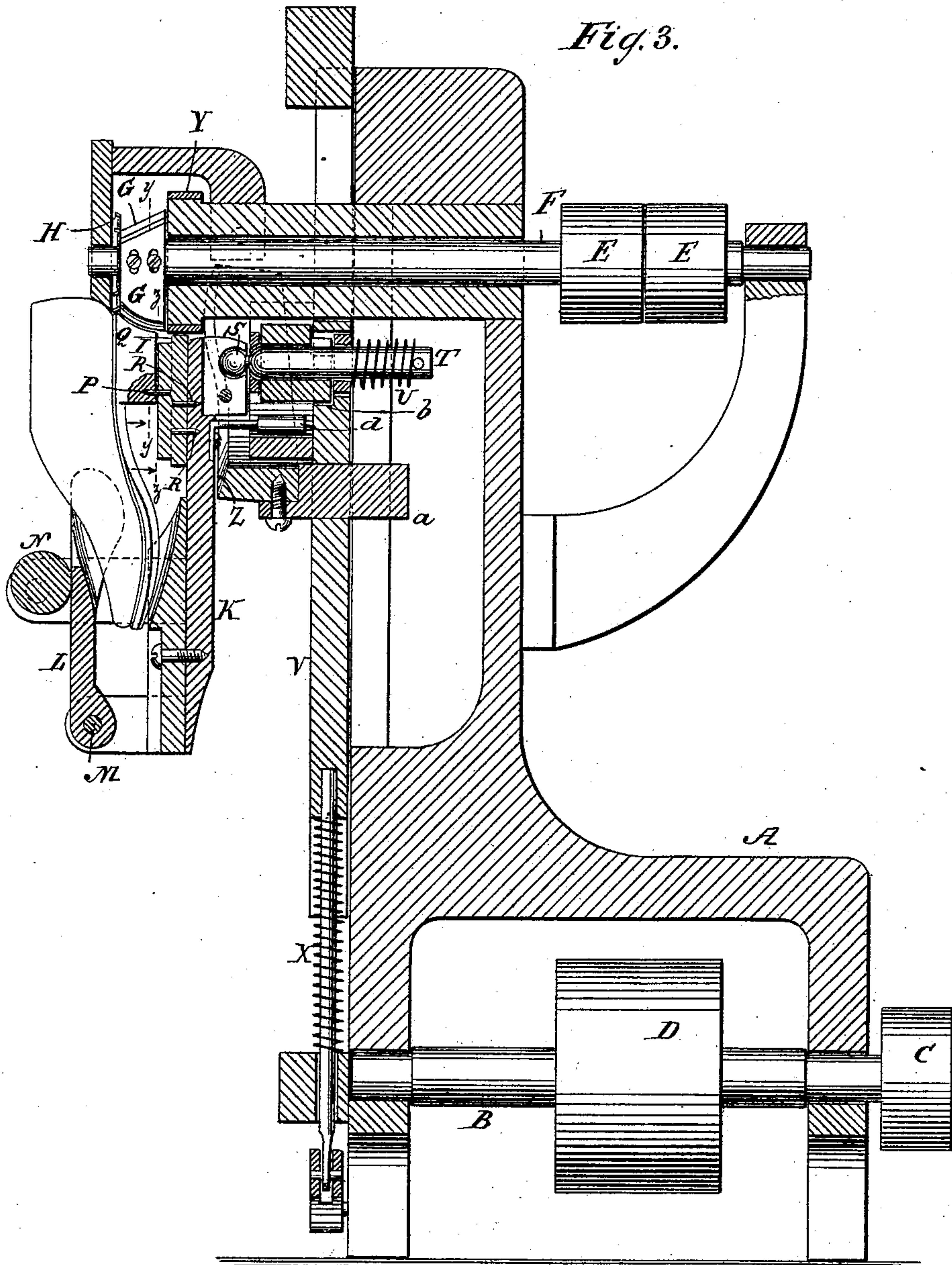
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Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES H. HELMS, OF POUGHKEEPSIE, NEW YORK, ASSIGNOR TO HIMSELF
AND CHARLES H. GOODSSELL, OF SAME PLACE.

HEEL-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 397,001, dated January 29, 1889.

Application filed November 8, 1888. Serial No. 290,295. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HELMS, a citizen of the United States, residing at Poughkeepsie, in the county of Dutchess and State of New York, have invented new and useful Improvements in Heel-Trimmers, of which the following is a specification.

This invention relates to a trimmer adapted to trim the heels of boots or shoes, and by means of this invention heels of various kinds can be readily trimmed, as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a heel-trimmer. Fig. 2 is a side elevation of part of a jack and adjacent parts. Fig. 3 is a section along the line $x x$, Fig. 1. Fig. 4 is a section along the line $y y$, Fig. 3. Fig. 5 is a section along the line $z z$, Fig. 3. Fig. 6 is a side view of a modification of the clamp. Fig. 7 is a front view of Fig. 6.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates a frame or support. The shaft B is rotated by suitable means, such as a driving-pulley, C. From the pulley D extends a belt (not shown) to one of the pulleys E, one of said pulleys being fast and the other loose, so that by shifting the belt the shaft F can be rotated or allowed to come to rest. The shaft F carries the trimmers or knives G H, the knife G acting on the heel I and the knife H on the rand. By detachably securing the knife G to the shaft F—as, for example, by screws—the knife can be readily removed when it is to be sharpened or replaced by another knife. A knife of any suitable shape can thus be readily put in place to trim a heel. Several knives G are shown secured to the shaft F; but one knife G can be made to serve in trimming the heel.

The shoe is shown supported by a jack or holder, the letter K indicating the base of the jack. A clamp, L, is hinged at M to the base K, and a lock-up, N, forces the clamp against the shoe. A simple lock-up is obtained by having a rotary eccentric which can be turned by a handle, O, Fig. 1, so as to force the clamp L against the shoe, or to release the clamp and

allow it to swing away from the shoe. The heel I is shown engaged by prongs or points P. The prongs P, in connection with the clamp L, hold the shoe and heel firmly in place. The prongs P are shown formed on a plate, Q, which is held in place on the base K by prongs or points R. The shoe can be readily drawn from the prongs P when the clamp L is loosened, and the plate Q can then also be readily removed from the base K. In the construction shown the plate Q serves as a pattern-plate, as will be presently explained, and it is thus of advantage to have said plate detachable, so that any suitable plate can be readily mounted on the base K. The points P, as seen in Fig. 3, can be made to pierce the heel I near its edge, so that when the operation is finished that part of the heel which has been pierced by the points P can be cut off, and the unpleasant appearance caused by the holes in the heel can be removed.

The base K is supported by a ball-and-socket joint, the ball of the joint being indicated by the letter S. The ball-stem T can be slid or moved toward or from the knife G, so that the heel I can be brought into proper position relative to the knife. A spring, U, tends to move the stem T away from the knife G. The stem T is mounted in a slide, V. A lever, W, is adapted to move the slide V against the resistance of the spring X, so that the jack is moved away from the knife G, and a shoe can be easily inserted into the jack. On releasing the lever W the spring X moves the slide so as to carry the jack toward the knife to allow the knife to act on the heel.

The jack is oscillated about the ball S during the trimming operation, so that the knife will act on all parts of the heel. By keeping the plate Q in contact with the rim Y during the trimming operation the heel can be given a cross-section similar in appearance to the plate Q, Fig. 5. The plate Q thus can be made to serve as a pattern-plate, and a number of plates having a variety of patterns can be kept on hand, so that any desired one can be readily placed onto the base K, so as to secure a desired form of heel.

A guide-flange, Z, Figs. 1 and 2, is provided, against which the base K is made to rest while said base swings about the ball S. The base K is thus steadied, and is also
 5 guided into position to present the heel I to the knife, so as to have the heel properly acted on by the knife. The flange Z is supported by a stem, *a*, resting in the slide V, and said stem is adjustable or slidable in the slide
 10 V, so that the flange Z can be set nearer to or farther from the knife G to secure proper guiding of the jack-base K.

The ball-stem T, or rather its support or box, can be moved laterally along the way *b*,
 15 Fig. 4. Springs *c*, pressing on arms *d'*, Fig. 1, extending from said stem T or its support, keep said stem in a central position. From the jack-base K extends an arm, *d*, and as said jack is swung about the ball S to the position shown in Fig. 4 the arm *d* of the jack
 20 strikes against one of the projections *e* and forces the ball-stem T laterally along the way *b*, so that the front part of one side of the heel is moved within reach of the knife G, so
 25 as to be trimmed. When the jack is swung from the position shown in Fig. 4 through a half-circle or one hundred and eighty degrees, the arm *d* comes into contact with the other projection *e* and forces the stem T laterally
 30 along the way *b*, so that the front part of the other side of the heel is moved within reach of the knife, so as to be trimmed.

The bearing portion *f f* of the clamp is shown as consisting of two wings or parts
 35 adapted to strike against opposite sides of the instep and hold the shoe against the base K. To enable said bearing portion to move into position to properly engage the instep, said bearing portion can be made to swing on
 40 a pivot, *g*, connecting said bearing portion to the body of the clamp L.

In Figs. 6 and 7 the clamp-body is shown as having secured thereto two plates, *h*, between
 45 which the bearing portion *f* can be pivoted by the pivot *g*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a heel-trimming machine, the combination, with a trimming-knife, of a jack or
 50 holder composed of a base, K, having prongs to engage the heel, a jointed clamp, L, and a rotating eccentric, N, for locking up the clamp, substantially as described.

2. In a heel-trimming machine, the combination, with a trimming-knife, G, of a jack or
 55 holder composed of a base, K, having a detachable holder, Q, provided with prongs, a clamp, L, pivotally connected with the base, and the rotating eccentric N for locking up
 60 the clamp, substantially as described.

3. In a heel-trimming machine, the combination, with a revolving trimming-knife, G, and its shaft F, of the stationary rim Y, located behind the knife, and a jack composed
 65 of a base, K, clamp L, lock-up N, and detachable pattern-plate Q, having its edge bearing against and movable around the edge of the

stationary rim for guiding the jack, substantially as described.

4. In a heel-trimming machine, the combination, with a revolving trimming-knife, G, and its shaft F, of the stationary rim Y, located behind the knife, and an oscillating
 70 jack composed of the base K, the pivoted clamp L, the rotating eccentric for locking up the clamp, and the detachable pattern-plate Q, provided with the prongs R and P, and having its edge bearing against and movable
 75 around the edge of the stationary rim for guiding the jack, substantially as described. 80

5. In a heel-trimming machine, the combination, with a knife or trimmer and a laterally moving and swinging jack, of a guide-arm, *d*, for said jack, and projections *e*, placed
 85 in the guideway of said arm for moving the jack in a lateral direction as said jack approaches one extremity or the other of its swing, and causing the knife to act along the entire extent of the heel-surface to be
 90 trimmed, substantially as described. 90

6. In a heel-trimming machine, the combination, with the revolving trimming-knife G, of the slide V, the oscillating jack carried by the slide, and the guiding-flange Z on the slide
 95 between the latter and the jack, and against which flange the rear surface of the jack-base bears in its oscillating movements, substantially as described. 100

7. In a heel-trimming machine, the combination, with a trimming-knife, of a slide, V, an oscillating jack carried by the slide, a
 105 guiding-flange, Z, located between the slide and jack, and a stem, *a*, carrying the flange and movable in the slide, substantially as described. 105

8. The combination, with a knife or trimmer, and jack having a support, T, adjustable toward and from the knife, of a guiding-flange, Z, for the base of said jack, substantially as
 110 described. 110

9. In a heel-trimming machine, the combination, with a knife or trimmer and a laterally moving and swinging jack, of springs *c* for holding said jack in a central position relative
 115 to the knife, a guide-arm, *d*, for said jack, and projections *e*, placed in the guideway of said arm for moving the jack in a lateral direction as said jack approaches one extremity or the other of its swing, substantially as described. 120

10. In a heel-trimming machine, the combination, with a trimming-knife, of a jack or holder composed of a base, K, having means
 125 to engage a heel, a jointed clamp, L, provided with a swinging bearing portion, *f*, and a lock-up for the clamp, substantially as described. 125

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

CHARLES H. HELMS. [L. s.]

Witnesses:

WM. C. HAUFF,
 E. F. KASTENHUBER.