

(No Model.)

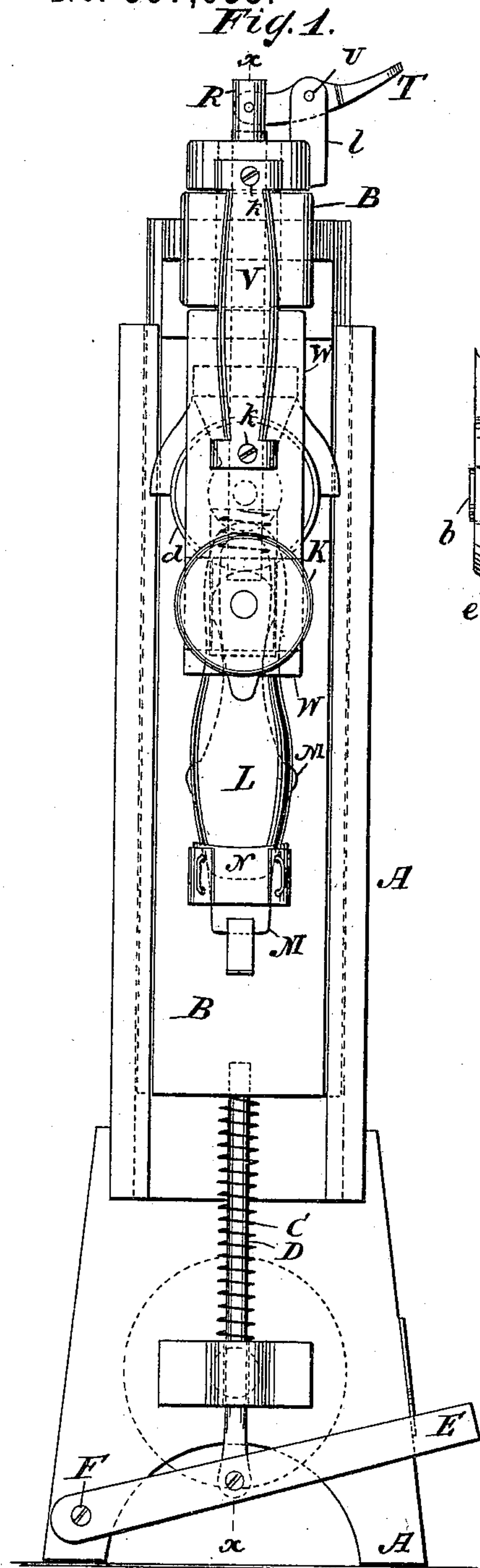
2 Sheets—Sheet 1.

C. H. HELMS.

HEEL TRIMMING MACHINE.

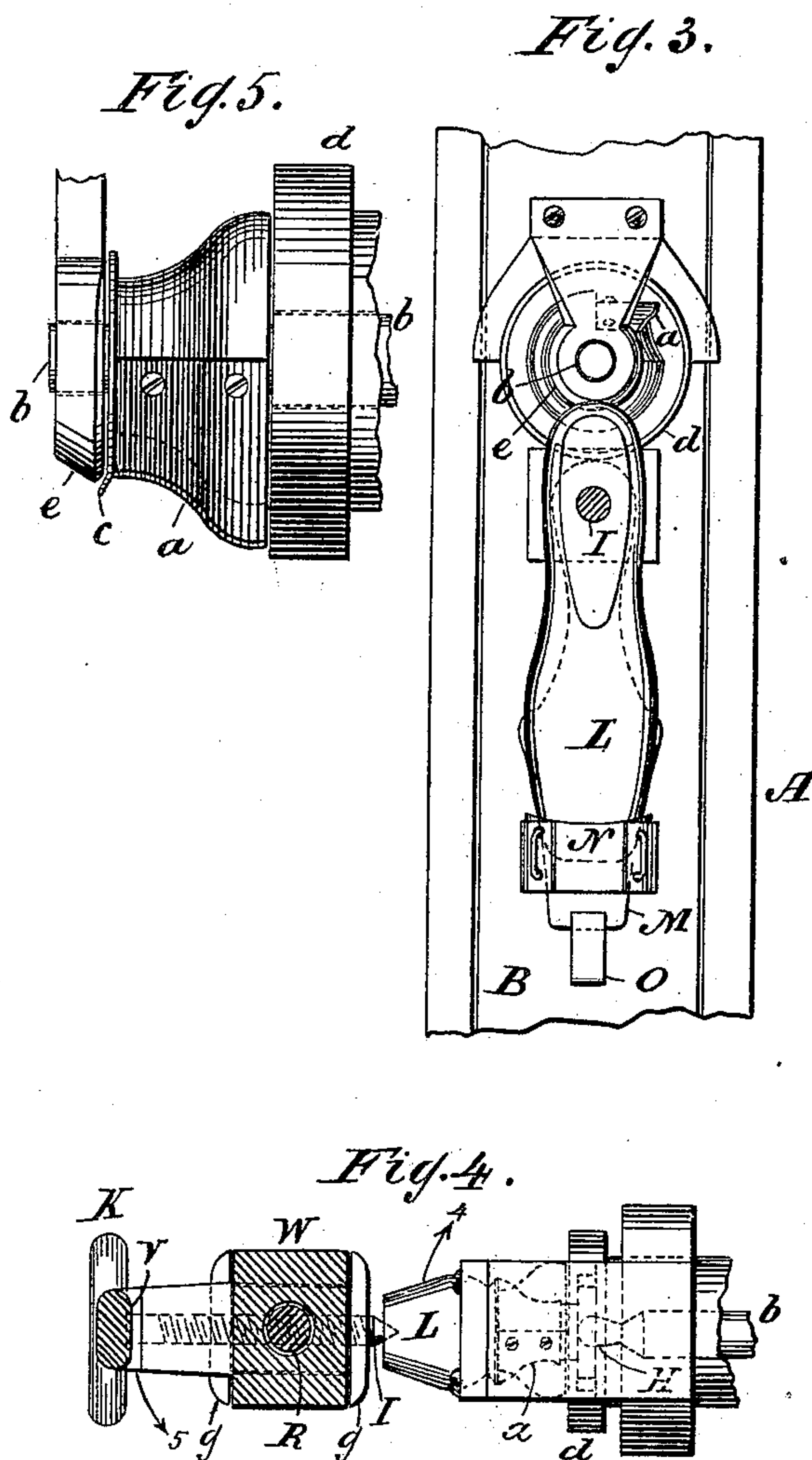
No. 397,055.

Patented Jan. 29, 1889.



WITNESSES:

Eduard Wolff:
William Miller



INVENTOR,

Charles H. Helms.

BY *Van Santwood & Haug,*
his ATTORNEYS.

(No Model.)

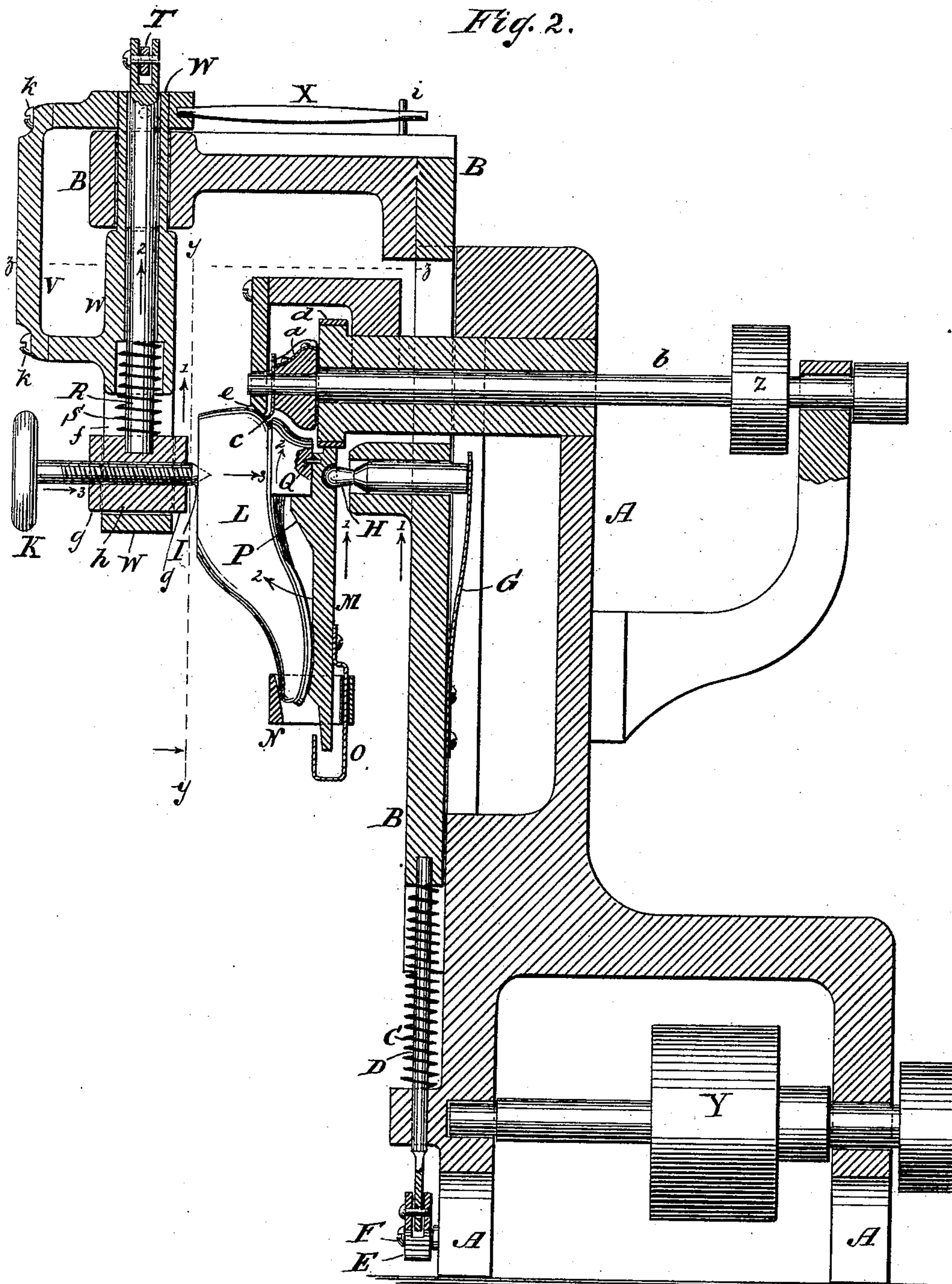
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Fig. 2.



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UNITED STATES PATENT OFFICE.

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

HEEL-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 397,055, dated January 29, 1889.

Application filed June 8, 1888. Serial No. 276,427. (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-Trimming Machines, of which the following is a specification.

This invention relates to a machine by which the heels of boots and shoes can be accurately 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-trimming machine. Fig. 2 is a section in the plane $x x$, Fig. 1. Fig. 3 is a section along the line $y y$, Fig. 2. Fig. 4 is a section along the line $z z$, Fig. 2. Fig. 5 is a detail side elevation of tools for working on the heel and rand, said Fig. 5 being on a larger scale than the preceding figures.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates a base or supporting frame. A movable frame, B, is pressed by the spring C in the direction of arrow 1, Fig. 2, and a link or rod, D, connected to a lever, E, can be made to move the frame B in the direction opposed to arrow 1. The fulcrum of lever E is shown at F. The frame B has a spring, G, Fig. 2, which presses a pivot, H, toward the pivot I. The screw-thread of pivot I and the wheel K can be made to force said pivot I in the direction of arrow 3—that is, toward the pivot H. The pivots H I can be made to clamp a shoe, L, and shoe-support M.

The shoe L contains a last with which the pivot I engages, and the approach of the pivots H I will press the shoe against the support M, and will cause said support M to be engaged by the pivot H, so that the shoe-support is universally jointed to said pivot. The support M has a movable or sliding toe-clamp, N, traveling on a guide, O, and a heel-rest, P, and pin or peg Q on the support M engaging the heel of the shoe L. When the toe-clamp N is slid into engagement with the toe of the shoe L, as seen in Fig. 2, the shoe is held firmly in place on the support M, the heel-rest P and peg Q engaging the heel of the shoe, as shown.

The pivot I is capable of being moved in the direction of the length of the shoe, as indicated by the arrow 2, Fig. 2, on the arm R, which supports the pivot I. A spring, S, tends to move the arm R in the direction opposed to said arrow 2. The motion of the arm R in the direction of arrow 2 will swing the shoe-support M and the shoe L in the direction of the arrow 2, shown on said shoe and on the shoe-heel, as will be hereinafter referred to. The lever T, swinging about the fulcrum U, Fig. 1, can be made to move the arm R in the direction of the arrow 2 on said arm R. Said arm R can be made to swivel or turn about its longitudinal axis by means of a handle, V. By swiveling the arm R and handle V in the direction of arrow 5, Fig. 4, the shoe L will be swung in the direction of the arrow 4 there shown. By swinging or swiveling the handle V in the opposite direction the arm R and shoe L will also be swung into the directions opposed to those indicated by the arrows 4 and 5.

A driving-pulley, Y, is adapted to connect by a belt (not shown) with a pulley, Z, and to rotate said pulley Z with its shaft b and with the tools or trimmer $a c$, secured to said shaft b . The tool a is made to act on the heel of the shoe L, and the tool c is made to act on the rand of the shoe. By swinging the shoe-support M and shoe L about the pivots H I different portions of the heel and rand can be presented to the tools $a c$. By swinging the shoe L in the direction of arrow 2, Fig. 2, or in the direction of arrow 4, Fig. 4, the tools $a c$ are made to act on the heel and rand at different angles. The desired amount and style of trimming can thus be rapidly accomplished.

A heel-guide, d , and rand-guide e prevent the frame B from carrying the shoe-frame M and shoe L too close to the tools $a c$, so that excessive trimming or working is avoided. The spring X, Fig. 2, keeps the arm R in position to hold the pivot I in line with the pivot H when the handle V is released. Said spring X is connected with the swivel-frame W and is braced against lugs or arms i , rising from the frame B. In the way or slot f , Fig. 2, of the swivel-frame W slides the box h , which is tapped to receive the screw-thread of the pivot

I. Said box *h* has flanges *g*, which guide said box *h* along the slot *f*. Said box *h* is caused to slide back and forth along the slot *f* by means of the spring *S* and lever *T*, as already described, said lever *T* being connected to the arm *R*, which arm *R* is secured to the box *h*. The lever *T*, as seen in Fig. 1, is fulcrumed on an arm, *l*, which is connected to the handle *V*, so that said arm *l* will swivel as the frame *W* swivels. The handle *V* is shown secured to the frame *W* by means of screws *k*.

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

1. The combination of the reciprocating slide-frame *B*, having a lengthwise-yielding projecting pivot, *II*, the shoe-support *M*, carrying a toe-clamp, *N*, and jointed to and supported by the projecting end of the pivot, the vertically-adjustable box *h*, and the lengthwise-adjustable pivot *I*, extending through the box and adjustable vertically therewith for pivotally engaging the last in the shoe and swinging the shoe-support back and forth to and from the slide-frame, substantially as described.

2. The combination of the reciprocating slide-frame *B*, having a lengthwise-movable projecting pivot, *II*, a spring, *G*, for throwing the pivot outward, a shoe-support, *M*, carrying a toe-clamp, *N*, and jointed to and supported by the projecting end of the movable pivot, a vertically-adjustable box, *h*, and a lengthwise-adjustable pivot, *I*, extending through the box for pivotally engaging the last in the shoe, substantially as described.

3. The combination of the reciprocating slide-frame *B*, having a projecting pivot, *II*, the shoe-support having a toe-clamp, *N*, and universally jointed to the projecting end of the pivot, the laterally-swinging frame *W*, swiveled to the slide-frame and provided with

a handle, *V*, a box, *h*, vertically adjustable on the swiveled frame, and a lengthwise-adjustable pivot, *I*, extending through the box and vertically adjustable therewith for pivotally engaging the last in the shoe and swinging the support to and from the slide-frame, substantially as described.

4. The combination of the reciprocating slide-frame *B*, having a lengthwise-movable projecting pivot, *II*, a spring, *G*, for throwing the pivot outward, a shoe-support, *M*, having a toe-clamp, *N*, and universally jointed to the projecting end of the movable pivot, the laterally-swinging frame *W*, swiveled to the slide-frame and having a handle, *V*, and slot *f*, a spring-impelled lengthwise-movable arm, *R*, located in the swiveled frame, a box, *h*, secured to the arm in the slot of the swiveled frame, and a lengthwise-movable pivot, *I*, extending through the box for pivotally engaging the last in the shoe, substantially as described.

5. The combination of the reciprocating slide-frame *B*, having a projecting pivot, *II*, the shoe-support *M*, jointed to the projecting end of the pivot, a laterally-swinging frame, *W*, swiveled to the slide-frame and provided with a handle, *V*, and a box, *h*, a lengthwise-adjustable pivot, *I*, extending through the box for pivotally engaging the last in the shoe, and a spring, *X*, secured to the swiveled frame, for normally holding the latter and keeping the two pivots in line, substantially as described.

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

CHARLES H. HELMS. [L. S.]

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.