

J. H. BUSELL.
Heel-Trimming Machine.
No. 213,806. Patented April 1, 1879.

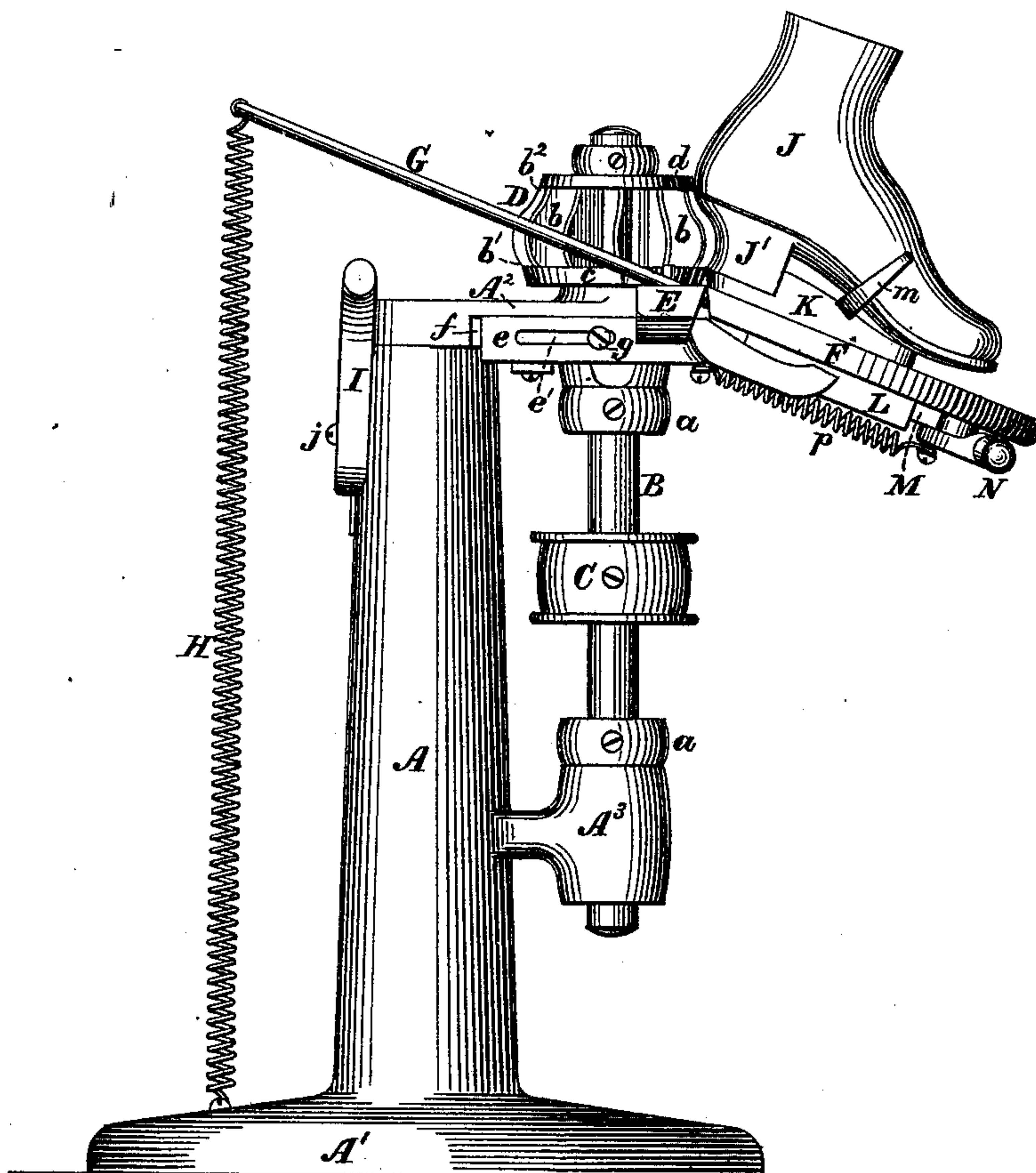


Fig. 2.

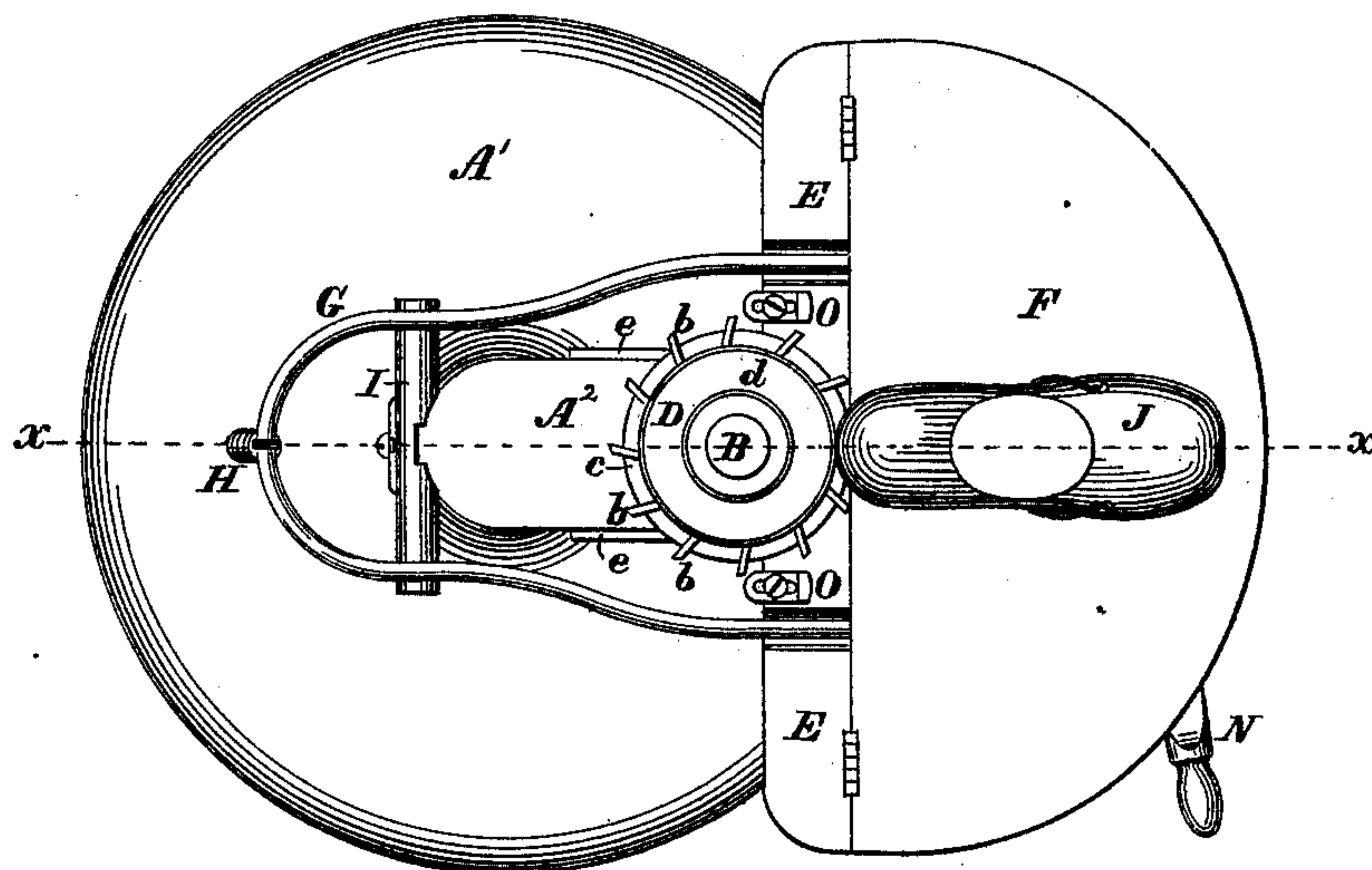


Fig. 1.

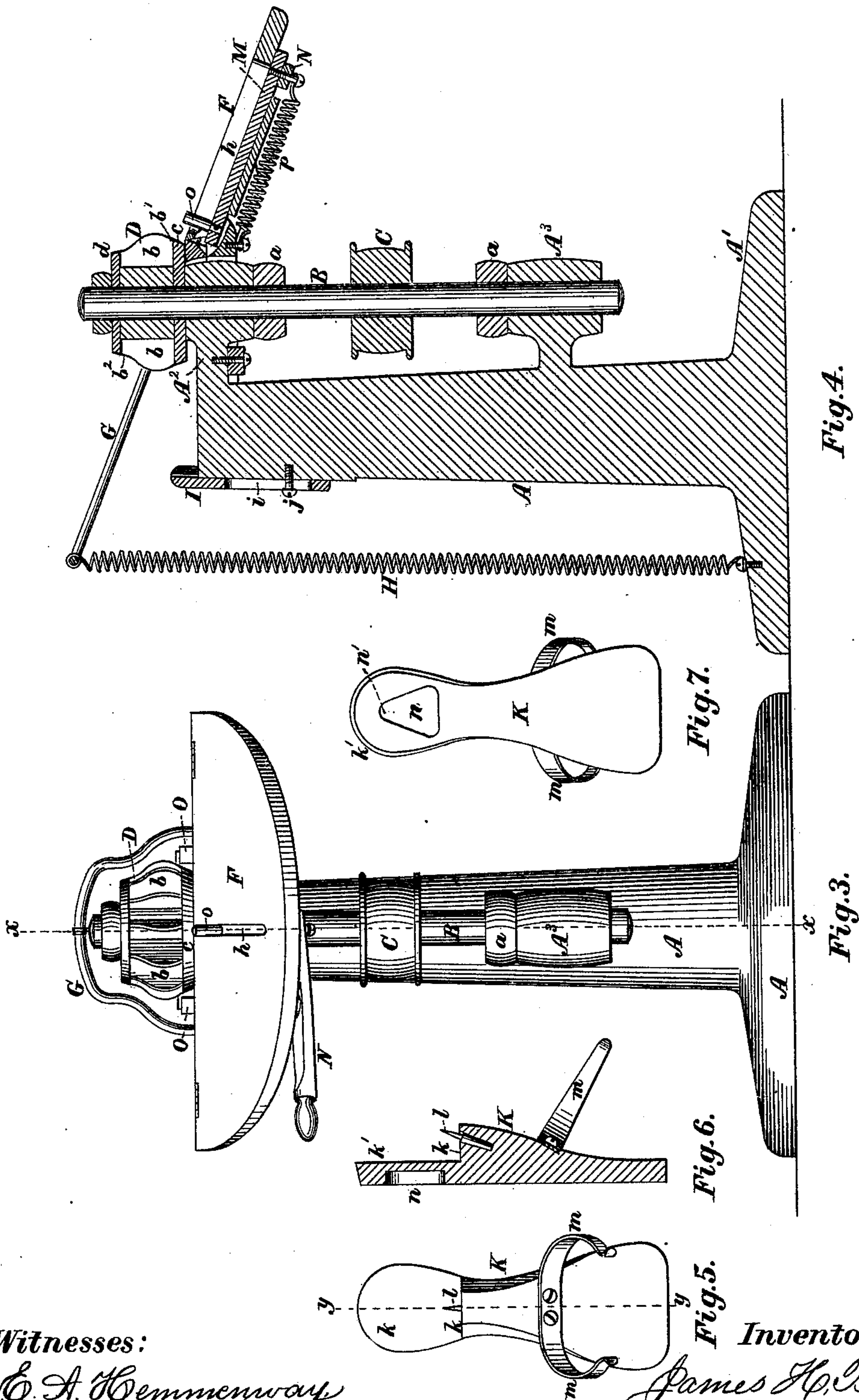
Witnesses:

E. A. Hemmenway,
Benj. Andrews, Jr.

Inventor:

James H. Busell
by N. C. Lombard,
Attorney.

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UNITED STATES PATENT OFFICE.

JAMES H. BUSELL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN HEEL-TRIMMING MACHINES.

Specification forming part of Letters Patent No. **213,806**, dated April 1, 1879; application filed February 19, 1879.

To all whom it may concern:

Be it known that I, JAMES H. BUSELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Heel-Trimming Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a machine for trimming the edges of boot and shoe heels; and it consists in the use, in combination, of a rotary cutter mounted upon a vertical shaft, and having the outer or cutting edges of its blades shaped to a counterpart of the desired vertical curve to be given to the edge of the heel, a gage placed beneath and in close proximity to said cutter, with its extreme front edge or corner coinciding with the lower corner of the front cutting-blade, and a pivoted shoe-supporting table adapted to be vibrated about an axis tangent to the extreme front edge of said gage, as will be described.

It further consists in the combination, with a rotary cutter, gage, and pivoted table, arranged and adapted to operate as above described, of a spring or equivalent device connected with said pivoted table, and adapted to raise the movable edge thereof after it has been depressed, as will be hereinafter described.

It further consists in the combination, with the rotary cutter, gage, pivoted table, and device for automatically raising the movable edge of said table, arranged and adapted to operate as above described, of an adjustable stop adapted to determine and limit the upward movement of said table.

It further consists in the combination of a cutting-tool mounted upon and adapted to be revolved at a high rate of speed about a vertical axis, and a pivoted shoe-supporting table adapted to be vibrated about a horizontal axis, when said cutter and table are adapted to be adjusted relatively to each other, to maintain the axis of the table in the same position relatively to the front lower corner of the cutting-blades of said cutter as the blades wear away.

It further consists in a peculiar construction of heel plate or pattern, to determine the shape

and size of the tread-surface of the heel, whereby it is readily secured to the shoe and detached therefrom, as will be further described.

It further consists in the use of a heel-pattern plate adapted to be secured to the tread-surface of the shoe-heel, and provided with a cam-shaped or pattern recess formed in its outer or under surface, in combination with a pin projecting above the surface of the shoe-supporting table, and adapted to enter said pattern-recess, and, by engaging with the walls thereof, serve as a guide to the pattern heel-plate.

It further consists in the use, in a heel-trimming machine, of a revolving cutter mounted upon a vertical shaft, a pivoted table adapted to be vibrated about a horizontal axis during the operation of trimming a shoe-heel, a pattern-plate to be secured to the tread-surface of the heel, and adapted to rest upon the upper surface of said table, a gage placed beneath and in close proximity to said cutter, as before set forth, and adapted to bear against the edge of the heel-pattern plate, and another gage, placed above said cutter, and adapted to bear by its edge against the upper of the shoe immediately above the rand.

It further consists in the use, in combination with a pivoted table adapted to be vibrated about a horizontal axis during the operation of trimming a heel, and a heel-pattern plate secured to the tread-surface of the shoe-heel, and provided with a recess in its under side, of a pin projecting upward through a slot in said table, and adapted to be retracted or moved away from the cutter, and a spring connected therewith, the tension of which tends to force said pin, and with it the shoe-heel, toward the cutter, as will be hereinafter described.

Figure 1 of the drawings is a plan of a machine embodying my invention. Fig. 2 is a side elevation. Fig. 3 is a front elevation. Fig. 4 is a vertical section on line *xx* in Figs. 1 and 3. Fig. 5 is a plan of the heel-pattern plate. Fig. 6 is a section on line *yy* in Fig. 5, and Fig. 7 is an inverted plan of the same.

A is a column, provided with the broad base-flange A^1 and the two projecting brackets or arms A^2 and A^3 , in which the vertical

shaft B in front thereof, with their front edges curved and made to coincide, respectively, with the lower and upper front corners of the front cutting-blade.

O O are two adjustable stops secured to the bar E, for the purpose of limiting the movement of the pattern-plate K, and the shoe contained thereon, about the pin o.

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

1. In a machine for trimming the edges of boot and shoe heels, the combination of the cutter-head D, mounted upon and adapted to be revolved with a vertical shaft, the gage c, and a pivoted shoe-supporting table, F, adapted to be vibrated about a horizontal axis tangent to the front edge of the gage c, all arranged and adapted to operate substantially as and for the purposes described.

2. The combination of the cutter-head D, mounted upon and adapted to be revolved about a vertical axis, the gage c, located beneath and in close proximity to said cutter-head, the pivoted table F, and the spring H, all arranged and adapted to operate substantially as and for the purposes described.

3. The combination of the cutter-head D, gage c, pivoted table F, arm G, spring H, and stop I, all constructed, arranged, and adapted to operate substantially as and for the purposes described.

4. In a machine for trimming the edges of boot and shoe heels, the combination of a cutter-head mounted upon and adapted to be revolved with a vertical shaft, and a pivoted shoe-supporting table adapted to be vibrated about a horizontal axis, when said cutter-head

and table are adapted to be adjusted, relatively to each other, substantially as and for the purposes described.

5. The heel-plate K, provided with the shoulder k and spur l, substantially as described, for the purposes specified.

6. The heel-pattern plate K, provided with the shoulder k, spur l, and springs m m, all arranged and adapted to operate substantially as and for the purposes described.

7. The combination, in a machine for trimming boot and shoe heels, of the pattern-plate K, provided with the cam-shaped or pattern recess n, and the spring-operated pin o, all arranged and adapted to operate substantially as and for the purposes described.

8. The combination of the cutter-head D, adapted to be revolved about a vertical axis, the pivoted table F, adapted to be vibrated about a horizontal axis during the operation of trimming a heel, the pattern-plate K, and the two gages c and d, all arranged and adapted to operate substantially as described.

9. The combination of the pivoted table F, adapted to be vibrated about a horizontal axis during the operation of trimming a heel, the heel-pattern plate K, provided with the recess n, the pin o, bar M, lever N, and spring p, all arranged and adapted to operate substantially as and for the purposes described.

Executed at Boston, Massachusetts, this 15th day of February, A. D. 1879.

JAMES H. BUSELL.

Witnesses:

N. C. LOMBARD,

E. A. HEMMENWAY.