

E. MAY.
Heel-Breasting Machine.

No. 216,623.

Patented June 17, 1879.

Fig. 1.

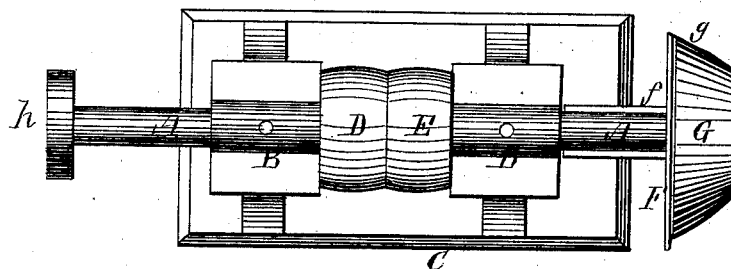


Fig. 2.

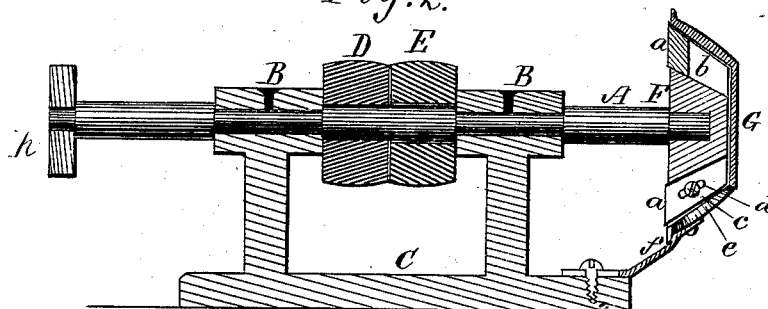


Fig. 3.

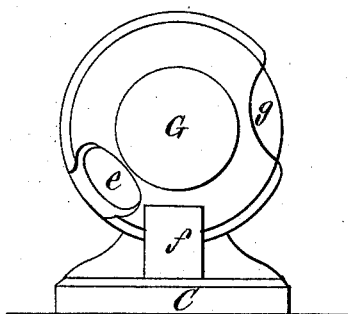
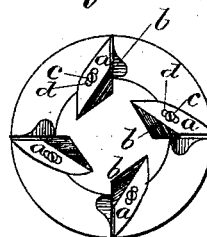


Fig. 4.



Witnesses.
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ELEZER MAY, OF NATICK, MASSACHUSETTS.

IMPROVEMENT IN HEEL-BREASTING MACHINES.

Specification forming part of Letters Patent No. **216,623**, dated June 17, 1879; application filed May 14, 1879.

To all whom it may concern:

Be it known that I, ELEZER MAY, of Natick, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Heel-Breasting Machines, of which the following is a specification.

This machine is designed for "breasting," as it is termed—that is, trimming—the front edges of the heels of boots and shoes, as well as for trimming the welts; and consists in the employment of a rotary cutter-stock mounted upon a horizontal arbor revolving in a head-stock, and armed with a series of radial knives, effective upon its inner face, the outer or front portion of such cutter-stock being covered by an annular hood or shield, which serves not only as a guide to the cutter and a means of protection to the boot-upper, but as a shield to prevent escape of shavings and dust into the apartment, and to deliver such shavings and dust at any desired point.

The hood or shield is secured adjustably or removably to the head-stock to permit access to be had to the knives, the whole operating as hereinafter described.

The drawings accompanying this specification represent, in Figure 1, a plan, in Fig. 2 a vertical and longitudinal section, and in Fig. 3 a front elevation, of a machine embodying my invention. Fig. 4 is a front view of the cutter-stock and its cutters or knives.

In the said drawings, A represents a horizontal arbor, mounted in boxes B B of a head-stock, C, and provided with a fast and loose pulley, D E, the arrangement of the head-stock and arbor being the same as in turning-lathes in general use, with the exception of the loose pulley.

Upon the front end of the arbor A, I affix a circular frusto-conical disk or head, F, which constitutes the stock, the knives or cutters being shown at *a a* as disposed within pockets or throats *b b*, &c., in the periphery of the head, and secured to one side of such throats by screws *c c*, &c., which pass through slots *d d*, &c., in the knives, and by means of which the positions of such knives upon the head and the depth of cut made by them are adjusted, the inner and cutting edges of these knives

extending beyond the inner face of the head to the extent necessary to effect the breasting of a heel or the trimming of a welt.

The knives, as will be seen, are arranged, preferably, obliquely to the axis of the head F; but they may be arranged radially, or in any other manner with respect thereto, and the peripheral throats or pockets which receive the knives communicate with an opening, *e*, in the lower part of a cup-shaped flaring hood or shield, G, which incloses the head F, with the exception of its inner face, the inner faces of the hood and head being flush, and the former being supported in position about the latter by a curved standard, *f*, secured at its foot adjustably to the base of the head-stock, to enable it to be readily removed and expose the knives when it becomes necessary to adjust or grind the latter.

One side of the hood G is cut away, as shown at *g*, in order that the edge of the cutter-stock and its cutters may closely enter the corner between the heel and sole of a boot or shoe, and enable the trimming of the breast of such heel to be carried entirely up to the sole.

The inner edge of the hood serves as a guard or guide to prevent injury to the other portions of the boot, while the body of the hood serves to confine and deflect the shavings and dust arising from the trimming operation, which escape through the outlet *e*.

In operating with this machine, the boot or shoe is held in the workman's hand and presented to the cutter-head with the breast of the heel against the inner face of such head, and the boot turned with a partial rotation until the cutter has traversed and trimmed the breast of the heel.

The machine may be also used, and will be found very useful and effective, for trimming the welts of boots; and an emery-wheel or other grindstone, *h*, may be secured to the rear end of the arbor to effect the grinding of the cutters, when necessary.

I claim—

1. In heel-breasting machines, a head-stock, a revolving arbor, a cutter-stock fixed to the arbor, and cutters or knives arranged and operating to be effective on the inner face of said stock, in combination with a hood which sur-

rounds the cutter-stock and has its inner face or edge flush with the inner face of said stock, substantially as set forth.

2. In combination with the cutter-stock and knives or cutters having their acting edges on the inner face of the same, the adjustable hood, under the arrangement and for operation substantially as set forth.

3. The hood formed with an escape-opening

and with a reduced part, *g*, in combination with the cutter-stock and knives or cutters carried thereby, for joint operation, substantially as hereinbefore set forth.

ELEZER MAY.

Witnesses:

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