J. H. BUSELL.

Edge-Setting and Burnishing Tools for Boots and Shoes.

No. 196,288. Patented Oct. 23, 1877.

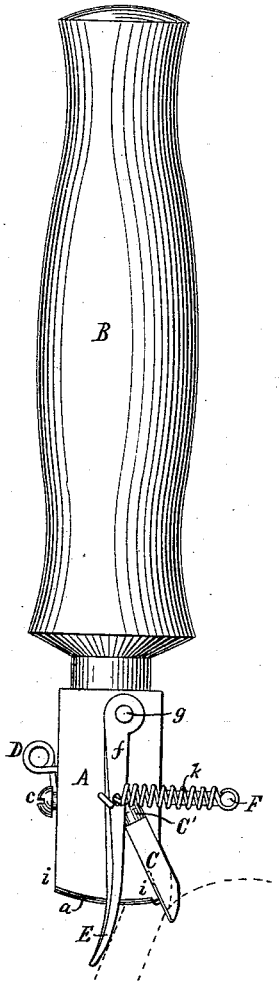

FIG. 1.

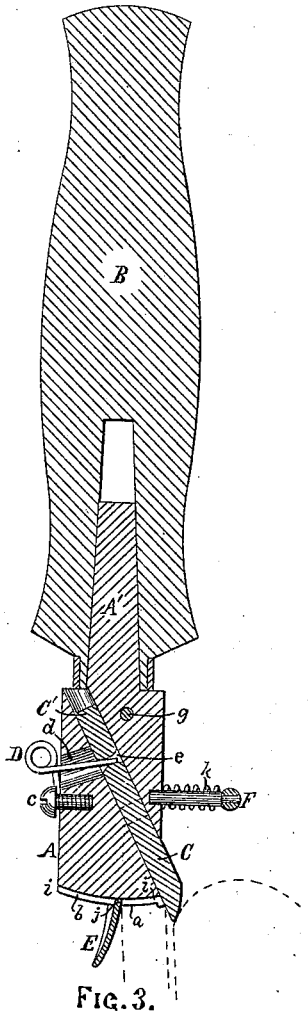

FIG. 3.

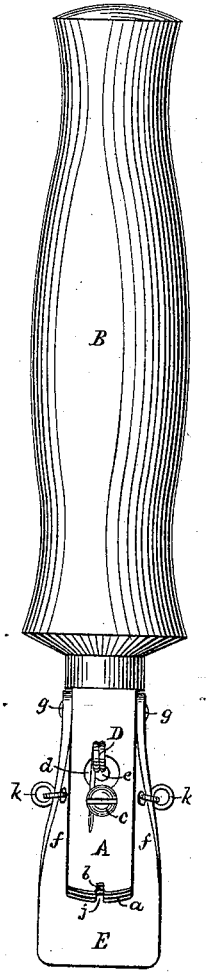

FIG. 2.

FIG. 5.

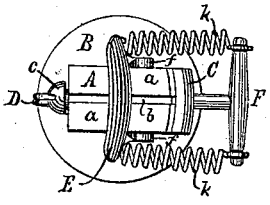

FIG. 4.

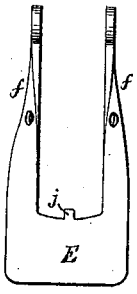

FIG. 6.

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UNITED STATES PATENT OFFICE.

JAMES H. BUSELL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN EDGE SETTING AND BURNISHING TOOLS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **196,288**, dated October 23, 1877; application filed August 1, 1877.

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 Edge Setting and Burnishing Tools for Boots and Shoes, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a tool for setting and finishing the edges of boot or shoe soles or heels, adapted to be used by hand or in a machine; and it consists, first, in applying to a burnishing-tool, adapted to set and finish the edge of a sole or heel by being reciprocated or oscillated to and fro in contact therewith, a rand-guide mounted upon a spring, and adapted to be moved endwise to accommodate the length of its projection beyond the burnishing-surface of the tool to the varying projection of the sole beyond the upper.

My invention further consists in the use, in combination with a burnishing-tool adapted to finish a hollow or concave edge on a sole or heel, of a pivoted apron or guard-plate extending across the burnishing-face of the tool, and adapted to press against the tread-surface of the sole, and automatically accommodate its position to the varying thickness of the sole or heel, its inner edge moving in close proximity to the curved surface of the burnishing-face of the tool.

My invention further consists in forming, in the face of the burnishing-tool, one or more grooves, extending across said surface at right angles to the direction of motion of said tool when in use, in combination with a yielding apron or guard-plate adapted to press automatically against the tread-surface of the sole, and adapt itself to the varying thicknesses thereof, and provided, upon its inner edge, with one or more teeth to fit said grooves, to prevent the formation of a feather-edge on the outer corner of the sole or heel.

Figure 1 of the drawings is a front elevation of my improved tool adapted to hand-use. Fig. 2 is a side elevation. Fig. 3 is a central longitudinal section. Fig. 4 is an inverted plan. Fig. 5 is an elevation of the rand-guide removed from the tool, and Fig. 6 is an elevation of the apron or guard-plate detached from the tool.

A is the burnishing-tool stock, provided with a shank, A′, by which it may be secured in the handle B for hand-use, or in the tool-carrier of any of the many edge setting and burnishing machines, in which the tool has imparted to it a reciprocating or oscillating motion.

The burnishing-face *a* of the tool A is made convex in two directions, and has formed therein one or more grooves, *b*, extending across it at right angles to the line of motion of said tool when in use, said groove or grooves dividing said burnishing-face into two or more distinct and separate burnishing ribs or surfaces, the corners of which adjacent to said grooves are rounded, to prevent injury to the sole-edge by the scraping or cutting of the sharp corner that would otherwise be presented.

C is the rand-guide, made in form shown in Figs. 1, 3, and 5, and fitted to a bearing formed in the tool A, and resting on the spring D in such a manner that it may move endwise to adapt the length of its projecting portion to the varying width of the projection of the sole beyond the upper, so that the best possible guide for the burnishing-tool may be had without danger of injury to the upper by burning or cutting it with the edge of the rand-guide.

The spring D is secured to tool A by the screw *c*, and its movable end engages with shank C′ of the rand-guide C, as shown in Fig. 3.

E is an apron or guard-plate, provided with two arms, *f f*, adapted to embrace the tool A, to which it is pivoted at *g*, in the axis of the curve *i i* of the convex face of the tool A, in such a position that the inner face or edge of the apron E will be in contact with the face of said tool at whatever distance from the rand-guide it may be placed within the limits of the width of the tool A.

The inner edge of the apron E has formed thereon one or more teeth, *j*, which project into the grooves *b* beyond the working face of the tool A, to prevent the formation of a feather-edge upon the outer corner or tread-surface of the sole.

The apron E is held hard against the tread-surface of the sole by the tension of the springs *k k*, connected at one end to the arms *f f*, and at the other end to the T-shaped stand F set in and projecting from the edge of the tool A,

said springs allowing the apron to yield and move along the curved burnishing-surface of the tool A as the sole increases in thickness, moving about its pivot *g* in an obvious manner.

By the use of my improved tool, either by hand or in a machine, the whole edge of a boot or shoe sole may be finished without change of tool, it only being necessary to change the relative position of the tool and sole-edge in passing from the beveled shank to the fore part, as indicated in Figs. 1 and 3, where the relative positions of the sole-edge are shown in dotted lines.

I do not claim, broadly, a yielding rand-guide or a yielding tread-guard, for I am aware that such devices of peculiar construction have been used separately; but

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

1. In combination with an edge setting and burnishing tool, a rand-guide set obliquely therein, and adapted to yield endwise to accommodate itself to the varying projection of the sole or heel beyond the upper, substantially as described.

2. The combination of the tool A, yielding rand-guide C, mounted in a bearing in said tool A, and the spring D, adapted to act upon said rand-guide to force it outward, substantially as and for the purposes described.

3. In combination with a burnishing-tool adapted to finish a hollow or concave edge on a sole or heel, a pivoted yielding apron or guard-plate extending across the burnishing-face of the tool, and adapted to be automatically moved, by mechanism substantially as shown and described, in a curved path along said working face of the burnishing-tool toward or from the rand-guide, to adapt its position to the varying thickness of the sole, and to press against the tread-surface thereof, substantially as and for the purposes described.

4. A burnishing or edge-setting tool, adapted to finish the edge of a sole or heel by a reciprocating or oscillating motion in contact therewith, having formed in its burnishing-face one or more grooves extending across the same at right angles to the line of motion of said tool when in use, and dividing said burnishing-face into two or more distinct working surfaces, in combination with a yielding apron or guard-plate extending across said burnishing-surfaces, and provided upon its inner edge with one or more projecting teeth to fit into said grooves, and adapted to press against the tread-surface of the sole or heel, substantially as described.

5. The combination of the tool A, yielding rand-guide C, and the pivoted yielding apron or guard-plate E, all constructed, arranged, and adapted to operate substantially as and for the purposes described.

6. The guard-plate or apron E, provided with the arms *f f*, and pivoted to the tool A, as set forth, in combination with the springs *k k*, one or more, substantially as described.

7. The apron or guard-plate E, provided with one or more inwardly-projecting teeth, *j*, and pivoted to the tool A by the radius arms *f f*, and adapted to automatically adjust itself to the varying thickness of the sole, and bear against the tread-surface thereof, substantially as and for the purposes described.

Executed at Boston, Massachusetts, this 28th day of July, A. D. 1877.

JAMES H. BUSELL.

Witnesses:
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