

J. H. BUSELL.
Rotary Cutter for Trimming Boot and Shoe Soles
and Heels.

No. 210,006.

Patented Nov. 19, 1878.

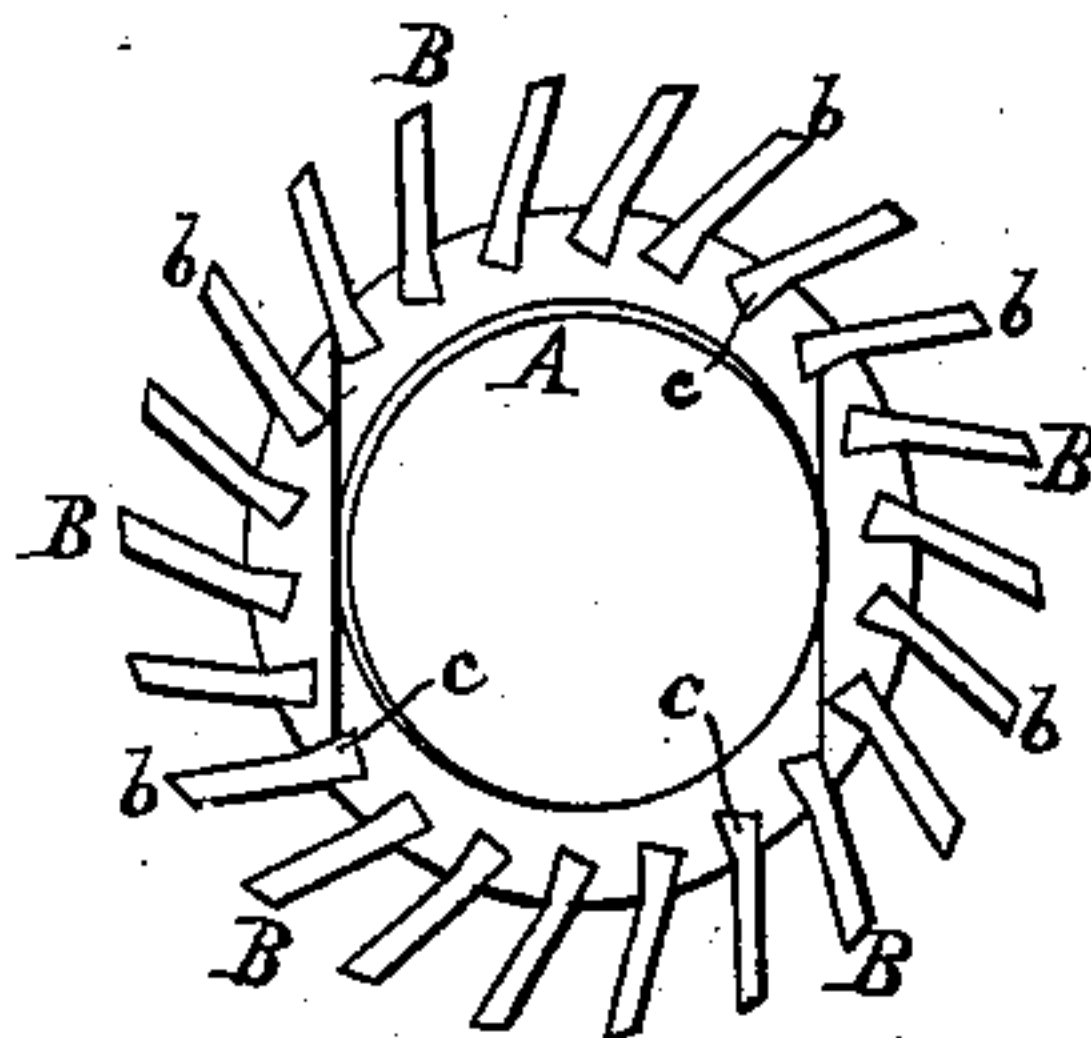


FIG. 1.

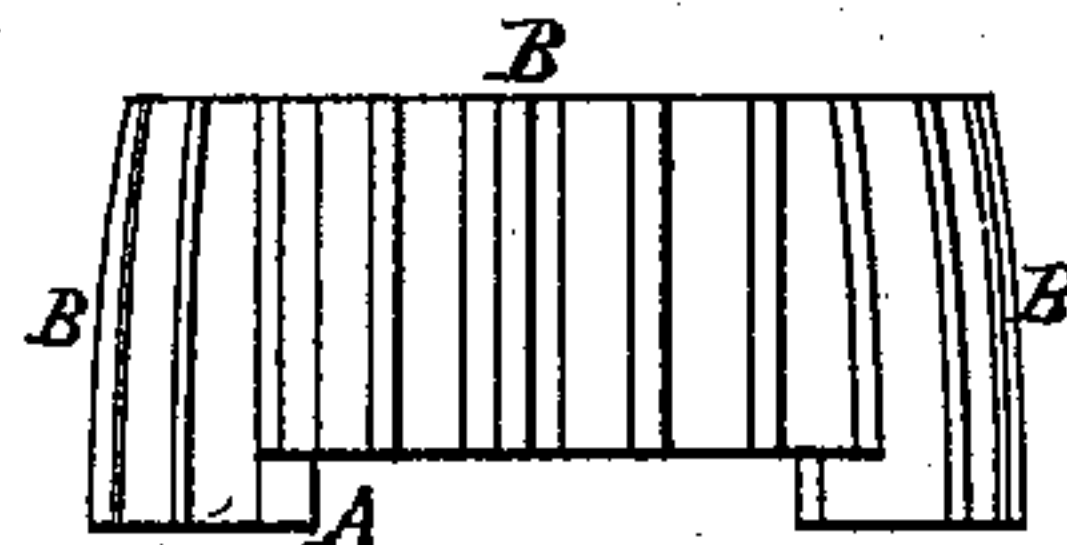


FIG. 2.

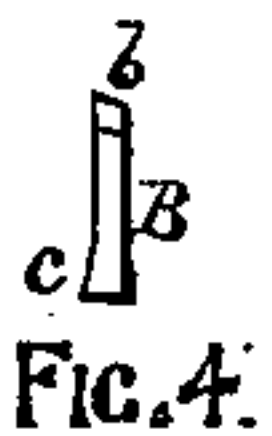


FIG. 4.

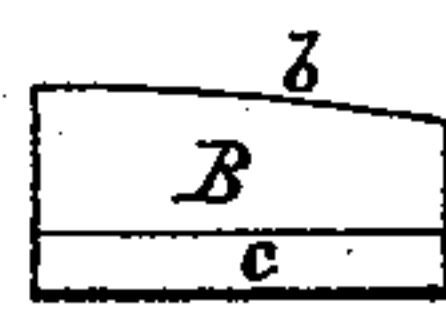


FIG. 3.

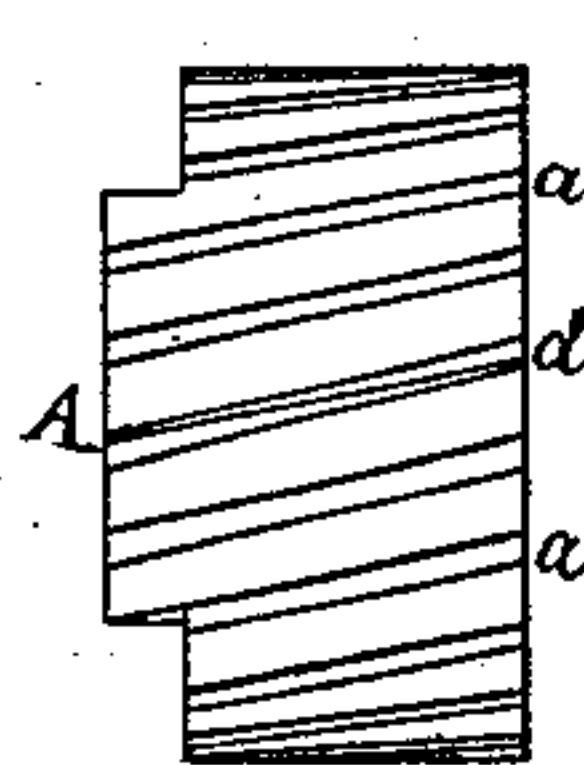


FIG. 7.

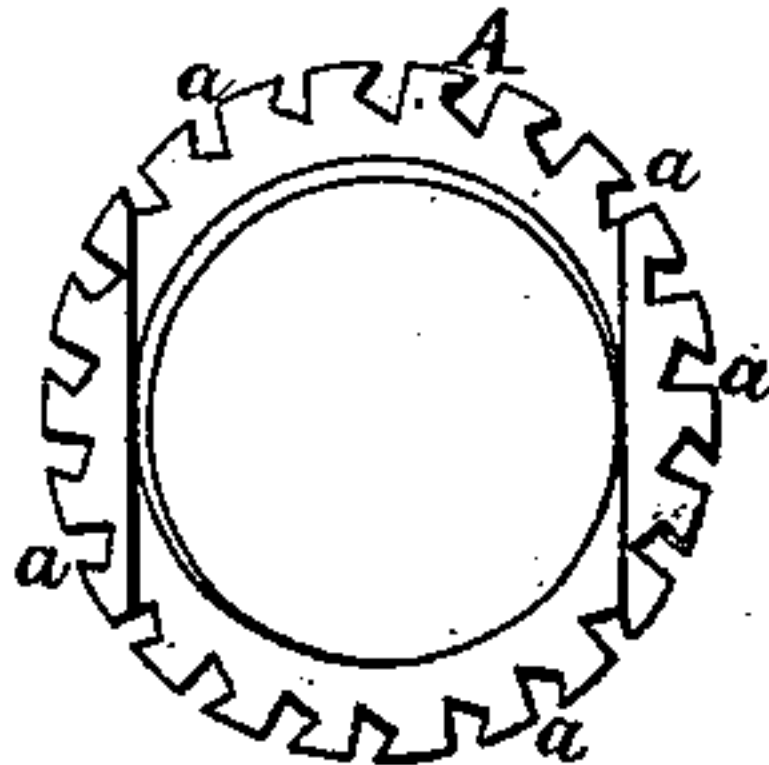


FIG. 5.

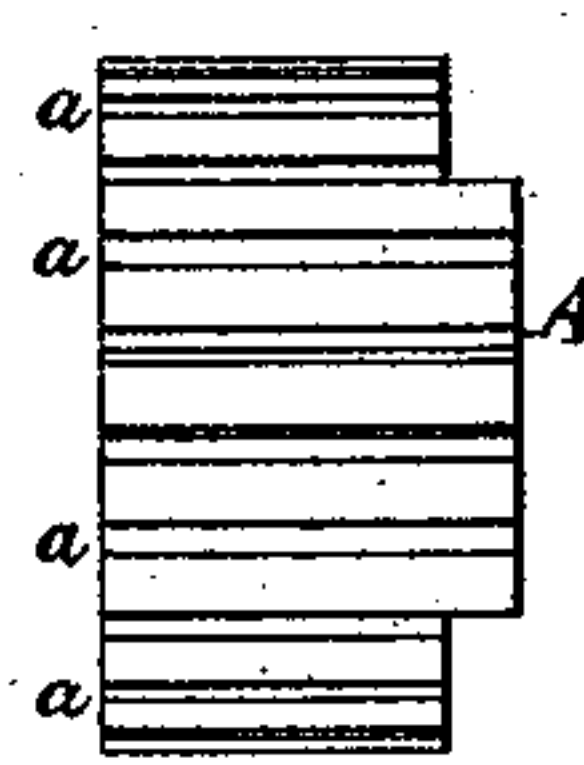


FIG. 6.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JAMES H. BUSELL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ROTARY CUTTERS FOR TRIMMING BOOT AND SHOE SOLES AND HEELS.

Specification forming part of Letters Patent No. **210,006**, dated November 19, 1878; application filed February 26, 1878.

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 a new and useful Improvement in Rotary Cutters for Trimming Sole-Edges, and for other purposes, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the construction of rotary cutters for trimming the edges of boot and shoe soles and heels, and for other light work; and has for its object the production of a cutting-tool for such purposes, that may be easily sharpened or kept in working condition, any blade of which may be readily removed and replaced by another in case of breakage, and to facilitate the proper and perfect tempering or hardening of such cutting-blades.

It consists in constructing said cutters with a central cylindrical hub, and a series of chisel-pointed cutting-blades set in the periphery of said hub and secured in place by means of dovetailed grooves extending longitudinally of said hub, either parallel with or inclined to the axis of the hub, and an increased thickness of stock upon the inner edge of said cutting-blades shaped to fit and tightly fill said dovetailed grooves, as will be described.

It has been found that when such cutters were made from one piece of metal, as generally practiced, the cutting-blades had to be made very short, or great difficulty would occur in tempering or hardening the same, and as a consequence the amount of wear that could be obtained from a cutter was quite limited; and when the short blades were worn down the whole cutter had to be discarded and a new one made to fill its place.

These difficulties are entirely overcome by the employment of my improved cutter, inasmuch as the cutting-blades, being made separate from the hub, and of nearly uniform thickness throughout, may be readily hardened uniformly throughout without danger of breaking or cracking them; and being made to a gage, so that they are of uniform shape and size, it follows that said blades are interchangeable, and, therefore, if one blade becomes broken it may be easily removed and

another put in its place, or when the whole set of blades become so worn as to be unserviceable a new set may be put in their places without the trouble and delay of sending the cutter to the machine-shop.

Figure 1 of the drawings is an end view of a cutter-head of a form adapted to use on the machine patented by me September 21, 1875, and having my present invention applied thereto. Fig. 2 is an edge view of the same complete. Figs. 3 and 4 are, respectively, a side elevation and an end view of one of the cutter-blades. Fig. 5 is an end view of the cutter-head or central hub with the cutting-blades removed. Fig. 6 is an edge view of the same; and Fig. 7 is a similar edge view illustrating a modification of said hub, with the grooves to receive the blades cut oblique to its axis for the purpose of setting the blades spirally, or so as to produce a drawing cut.

A is the cutter-head or hub, fitted with a female screw-thread, by which it may be secured upon the end of the cutter-shaft of a sole or heel trimming machine, and having formed in its periphery a series of dovetail-shaped grooves, *a a*, extending longitudinally thereof parallel with its axis, as shown in Fig. 6, or oblique thereto, as shown in Fig. 7.

B B are the cutting-blades, made from a thin plate of steel, cut to the proper form, with their cutting-edges beveled to form a chisel-shaped edge, *b*, the inner edges, *c*, of said cutter-blades being slightly thickened and dovetail-shaped, so as to fit closely in the grooves *a a*, as shown in Fig. 1, the two sides of that portion of said blades which project beyond the periphery of the hub A being parallel, or nearly so, with each other, as shown in Figs. 1 and 4.

These blades may be set in the hub so as to stand out radially therefrom, but I prefer to set them inclined to a radial line, as shown in Fig. 1, for the reason that the edge of the blade or knife is presented to the work at a better angle to cut than if the front side of the blade were radial to the axis of revolution.

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

A cutting-tool composed of a central cylin-

drical hub and a series of detachable cutting-blades provided with a chisel-shaped cutting-edge, and secured to said hub with their front sides inclined to radial lines by means of a dovetailed joint extending longitudinally of said hub, substantially as and for the purposes described.

Executed at Boston, Massachusetts, this 23d day of February, 1878.

JAMES H. BUSELL.

Witnesses:

N. C. LOMBARD,

E. A. HEMMENWAY.