

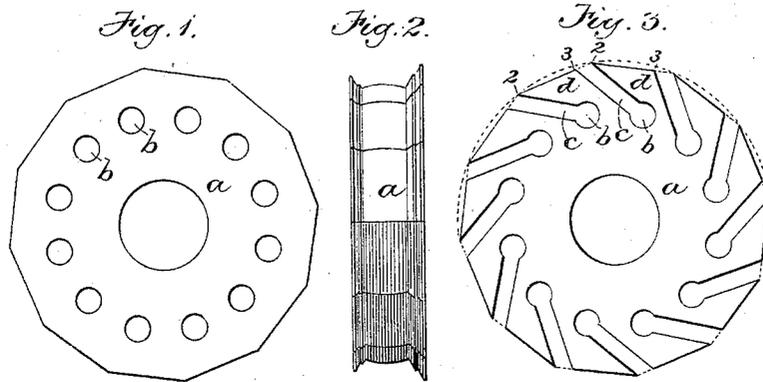
(No Model.)

A. E. STIRCKLER.

ROTARY CUTTER.

No. 284,086.

Patented Aug. 28, 1883.



Witnesses:
A. L. White
W. Rogers

Inventor:
A. E. Stirckler
by Wright & Brown
Attys

UNITED STATES PATENT OFFICE.

ALBERT E. STIRCKLER, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND JOHN D. STIRCKLER, OF SAME PLACE, AND ANDREW EPPLER, JR., OF BOSTON, MASSACHUSETTS.

ROTARY CUTTER.

SPECIFICATION forming part of Letters Patent No. 284,086, dated August 28, 1883.

Application filed April 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. STIRCKLER, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain
5 Improvements in Rotary Cutters, of which the following is a specification.

This invention relates to rotary cutters particularly designed for trimming the edges of boot or shoe soles, and composed of a series of
10 molded cutting-teeth secured to or formed on a rotary hub or center.

The invention has for its object to provide certain improvements in the construction of this class of cutters, whereby they are enabled
15 to operate to better advantage than heretofore.

My invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figures 1 and 2 represent, respectively, side and edge views of a
20 blank from which one form of my improved cutter is made. Fig. 3 represents a side view of a cutter made from said blank.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I form a polygonal blank or body, *a*, having any desired number of sides, each of which is molded transversely to the shape it is desired to impart to the article to be trimmed. Through the body
30 I bore a series of transverse holes, *b*, corresponding in number to the sides in the perimeter of the body. From each hole I cut a slot, *c*, extending diagonally to the perimeter of the body, one side of each slot intersecting the perimeter of the body at the angle formed by two of the faces of said perimeter, and forming the front surface of a cutting blade or tooth,
35 *d*, while the other side intersects the perimeter of the body at a point between the ends of one of said faces, and constitutes the back of another tooth, *d*. It will be seen, therefore, that the cutting-edge 2 of each tooth is farther
40 from the center of the body than the heel 3, this difference in distance giving the tooth the necessary clearance in cutting. It will also be seen that the heel 3 of each tooth, when made nearer the cutting-edge of the succeeding
45 tooth than the cutting-edge of the tooth

to which it pertains, is higher—*i. e.*, farther 50 from the center of the body—than the central portion of the tooth between the heel and the cutting-edge. The heel 3 of each tooth is therefore caused to act as a guard to limit the depth of the cut by forcing the material being
55 trimmed slightly away from the cutter after the cutting-edge of the same tooth has entered said material. In other words, the heel of each tooth prevents the operator from pressing the material against the cutter to such an
60 extent as to cause the teeth to enter the material too deeply, the work to be trimmed being held and presented to the cutter by the hands of the operator, as usual in this class of machines. The orifices *b* are wider than the slots
65 *c*, and constitute recesses or enlargements in the inner side of said slots, which permit the free movement of a sharpening-tool along the side of each slot that constitutes the front side of a tooth. The polygonal form of the body *a*
70 gives the teeth their proper clearance, and obviates the necessity of any subsequent operation—such as bending backwardly or backing off to give the teeth clearance. The width of the slots *c* determines the relative height of
75 each guard 3, and therefore the depth or “rankness” of the cut of each tooth.

It will be observed that a line drawn from the point to the heel of any tooth in my cutter, and parallel with either side of the
80 cutter, is a straight line. This line, if continued beyond the heel of the tooth, will be above the point of the next succeeding tooth, or it may touch said point, but will never be below it. The succeeding tooth must not project beyond
85 this line, because if it did it would have a tendency to eat into the work.

The gist of my invention is that the heel of each tooth, being on or above a line drawn from its point to the point of the succeeding one,
90 shall serve as a guard to prevent such eating in.

I have shown the teeth as separated by slots with parallel sides. This is a very good and convenient way to make them, and so made
95 they may be easily sharpened; but it is not absolutely necessary that the slots should have parallel sides.

In sharpening my cutter the heel, as well as the point, of each tooth is usually cut away; but the periphery of each tooth remains always in a plane forming part of the boundary
5 of a true polygon.

I claim—

A rotary cutter whose perimeter is a true polygon divided by slots, as described, to form cutting-teeth, so that a straight line drawn, as
10 described, from point to heel of one tooth

must, if continued, pass above the point of the succeeding tooth, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of April, 1883. 15

ALBERT E. STIRCKLER.

Witnesses:

C. F. BROWN,
A. L. WHITE.