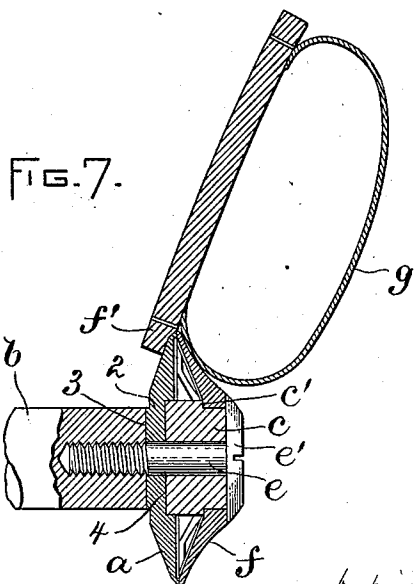
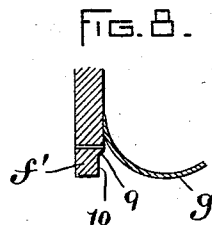
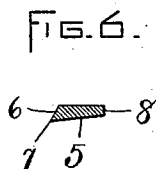
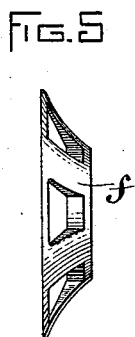
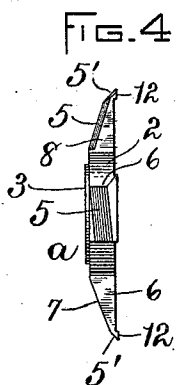
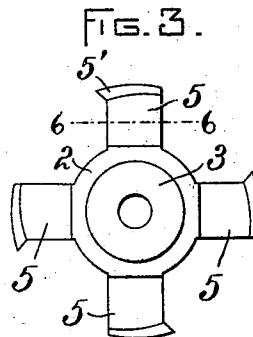
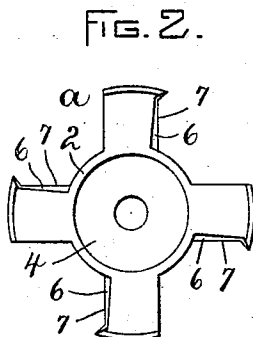
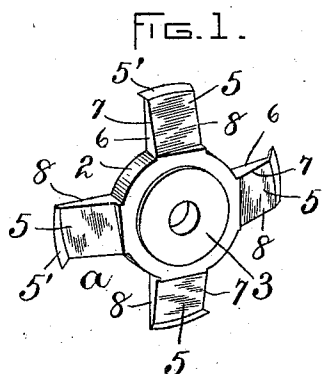


(No Model.)

E. F. MAXWELL.
RAND TRIMMER.

No. 549,676.

Patented Nov. 12, 1895.



WITNESSES:
A. D. Harrison.
Rollin Abell.

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Attys.

UNITED STATES PATENT OFFICE.

EDWIN F. MAXWELL, OF WEST BRIDGEWATER, ASSIGNOR OF ONE-HALF TO
CHARLES F. MAXWELL, OF NORTH BROOKFIELD, MASSACHUSETTS.

RAND-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 549,676, dated November 12, 1895.

Application filed September 23, 1895. Serial No. 563,281. (No model.)

To all whom it may concern:

Be it known that I, EDWIN F. MAXWELL, of West Bridgewater, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Rand-Trimmers, of which the following is a specification.

This invention relates to cutter-heads for trimming off a portion of the welt of a welted boot or shoe outside of the line of stitches that connect the welt with the outer sole.

The invention has for its object to provide a simple, durable, efficient, and easily-sharpened cutter and improved means for securing to the same an upper guard to prevent the cutter from touching the upper of the boot or shoe.

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

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved cutter. Figs. 2 and 3 represent side views of the same. Fig. 4 represents an edge view of the same. Fig. 5 represents an edge view of the upper guard. Fig. 6 represents a section on line 6-6 of Fig. 3. Fig. 7 represents a sectional view of the cutter-head and of a boot or shoe presented thereto. Fig. 8 represents a sectional view of a portion of a boot or shoe as trimmed by my improved cutter.

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

In the drawings, *a* represents my improved rand or welt trimming cutter, which is composed of a hub 2, having on one side a face 3 adapted to bear on a seat formed on the end of a driving-shaft *b*, as shown in Fig. 7, and on the other side a face or seat formed to fit a clamping-disk *c*, which co-operates with a screw *e* in clamping the hub against the end of the shaft.

Radiating from the margin of the hub are a series of blades, each having an outer side 5, which is inclined relatively to the axis of the shaft, and a front edge 6, formed at an acute angle with the inclined side 5, the intersection of said side and edge forming the cutting-edge 7. The outer side 5 is backed off from the cutting-edge 7 to the rear edge 8, as shown

in Fig. 6, to give the blade the requisite clearance. Each blade is substantially wedge-shaped lengthwise, as shown in Figs. 1 and 4, its outer end being reduced to a thin edge, so that it can readily enter the rand-crease of a boot or shoe. The outer side 5 of each blade is beveled at its outer end to form a face 5', giving the cutting-edge 7 a slight angle at its outer end, so that it forms an abruptly-sloping surface 9 on the sole *f'* at the inner edge of the trimmed portion, as shown in Fig. 8. The inclination of the cutting-edge relatively to the axis of rotation causes it to give the outer portion 10 of the trimmed surface a gradual inclination. In order that the beveled face 5' may have sufficient length without unduly increasing the thickness of the blade, I provide the outer end of each blade with a lip 12, Fig. 4, which extends out over the flat inner side of the blade and correspondingly extends the face 5'.

f represents an upper guard, which is a dished annular disk, the outer edge of which is formed to bear on the inner sides of the blades at the outer ends thereof. The inner edge of the guard *f* bears on the disk *c* and is held in place thereon by a shoulder *c'* on the disk *c* and by the head *e'* of the screw *e*, as shown in Fig. 7, the guard being preferably fitted loosely on the disk *c*, so that it may be held from rotating by contact with the upper *g* while the sole *f'* is being acted on by the cutter.

It will be seen that the described form of the cutter enables its blades to be readily ground and kept in good operative condition, there being ample space between each blade and the next for a grinding-tool. The parts can be readily separated and connected by removing and applying the screw *e*.

I claim—

1. A rand-trimming cutter composed of a hub and a series of wedge-shaped blades radiating therefrom, the outer sides of the blades being inclined relatively to the axis of the cutter, provided with beveled faces and laterally projecting lips at their outer ends, sharpened to form inclined cutting edges, and backed off to give clearance to said cutting edges.

2. A rand-trimming cutter-head comprising a cutter composed of a hub having a central

orifice and a series of radiating blades, the
outer sides of the blades being inclined rel-
atively to the axis of the cutter-head, sharp-
ened to form inclined cutting edges, and
5 backed off to give clearance to said cutting
edges; a clamping disk formed to bear on one
side of the hub and having an orifice coincid-
ing with the orifice in the hub; an upper
guard fitted upon the periphery of said disk,
10 and an attaching screw formed to enter the
orifices in the clamping disk and hub and to
project from the hub for engagement with a

driving-shaft, and provided with a head
formed to hold the clamping disk against the
hub and retain the guard on the clamping 15
disk.

In testimony whereof I have signed my
name to this specification, in the presence of
two subscribing witnesses, this 16th day of
September, A. D. 1895.

EDWIN F. MAXWELL.

Witnesses:

N. C. SOUTHARD,
C. R. FIELD.