S. H. HODGES.

Improvement in Rotary Cutter-Heads for Sole and Heel Trimming-Machinery.

No. 128,728. Patented July 9, 1872.

Fig. 1.

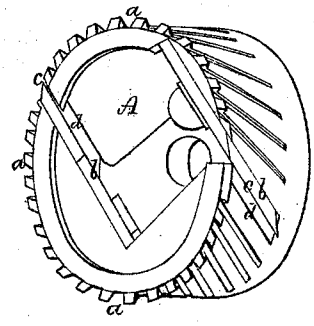


Fig. 2.

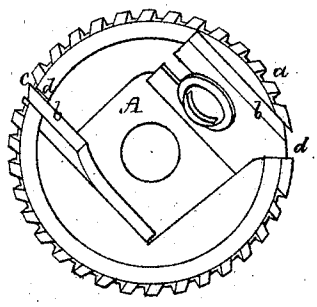
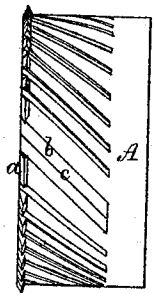


Fig. 2.



Witnesses.

Wm. B. Shedd

H. E. Boardman

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by his attorney.

F. Curtis

UNITED STATES PATENT OFFICE

SAMUEL H. HODGES, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE HODGES EDGE-TRIMMING AND SETTING-MACHINE ASSOCIATION, OF SAME PLACE.

IMPROVEMENT IN ROTARY CUTTER-HEADS FOR SOLE-AND-HEEL-TRIMMING MACHINERY.

Specification forming part of Letters Patent No. 128,728, dated July 9, 1872.

Specification descriptive of certain Improvements in Rotary Cutter-Heads for Sole-and-Heel-Trimming Machinery, invented by SAMUEL H. HODGES, of Lynn, Essex county, Massachusetts.

These improvements relate to rotary cutter-heads for sole-and-heel-trimming machinery, consisting of a hollow disk, having its periphery armed with a series of knives whose cutting-edges are arranged obliquely to its path of revolution, in order to attain a "drawing cut;" and said improvements consist, first, in disposing the angle of said knives in directions opposite to each other, in order that both the inside and outside corner of the sole may be trimmed equally well; and, secondly, in extending each knife through the annular guard or flange which surrounds the inner end of the disk, the purpose of this disposition of the knife being to enable it to effectually trim the sole entirely up to such guard.

The accompanying drawing represents in Figure 1 a perspective view, in Fig. 2 an edge view, and in Fig. 3 an end elevation, of a cutter-head embodying my improvements.

In said drawing, A represents a hollow circular disk, such as is shown substantially in Letters Patent of the United States, No. 117,287, and issued to me on the 25th day of July, 1871, the inner corner of such disk terminating in an annular encirclinglip, *a*, which extends into the "rand seam" of the boot or shoe, and constitutes a guide to properly direct the disk. The trimming-knives or cutters are shown at *b b* as secured to the inside of the disk, and with their cutting-edges *c* protruding through its periphery by means of slots *d d* formed therein.

The evils heretofore existing in these cutter-heads, which my present improvements are designed to obviate, are these: First, the knives being placed obliquely of the periphery of the cutter-head to obtain the necessary drawing cut, and all disposed in a like direction, it happens that one or the other corner of the sole (according to the direction of the slope of the knives) is imperfectly trimmed, and an uneven or ragged edge is the result; second, the outer edge or corner of the knife terminates at the inner edge or base of the annular guard of the cutter-head, and it is very difficult, or at least a matter of care, to so adjust the knife that these two edges shall exactly meet, which is imperative, or the sole edge is not properly trimmed. Again, it is well known that the corner of a knife of this character cannot be tempered well, and the result is that such corner becomes dulled and worn much sooner than the greater part of the cutting-edge, and for this reason alone imperfect work often results.

In carrying out the first part of these improvements, I arrange the slope or angle of a portion of these knives in a direction opposite to that of the remainder, the result of which is that the bur or rough edge produced by one set of knives is removed by the other set, and I am enabled to entirely avoid a rough edge or bur at either corner of the sole, and to trim both these corners with an equal degree of perfection.

In carrying out the second feature in these improvements, I extend the oblique knife-receiving slots or apertures *d d* entirely through the inner edge of the cutter-head or disk A and its annular flange or guard *a*, and I produce the knives *b b* of a width sufficiently great to enable their cutting-edges to extend partially or entirely through the guard *a*, by which means the extreme and comparatively soft corner of the knife is relieved from labor and its properly-tempered portion brought into action entirely up to the guard. By this means, also, I entirely avoid the difficulty and labor heretofore existing in the attempt to obtain a perfect joint between the knife-edge and the guard.

Claims.

I claim—

1. In cutter-heads or stocks of sole-and-heel-trimming machinery, the arrangement of

the cutting-edges of its knives at varying oblique angles with respect to its periphery, substantially as and for purposes stated.

2. In cutter-heads or stocks of sole-and-heel-trimming machinery, in which the stock is composed of a hollow disk carrying an annular or surrounding lip or guard, as stated, I claim the extension of the cutting-edge of each or any knife, partially or entirely, through the said guard, substantially as and for purposes stated.

SAMUEL HORATIO HODGES.

Witnesses:
F. CURTIS,
W. E. BOARDMAN.