

(No Model.)

J. E. HARWOOD.

TOOL GUIDE FOR SHARPENING LAWN MOWER KNIVES.

No. 462,435.

Patented Nov. 3, 1891.

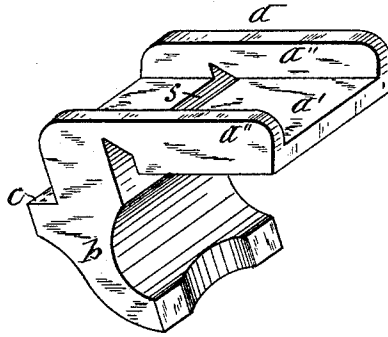


Fig. 1

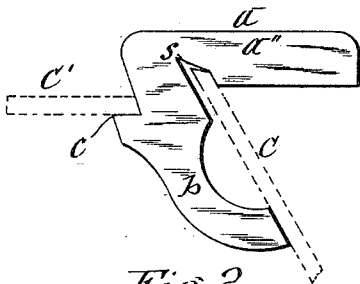


Fig. 2

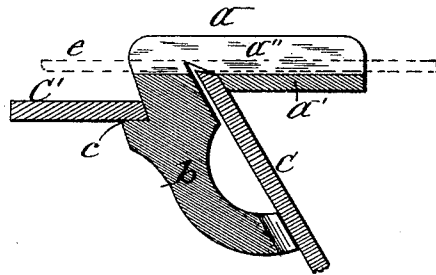


Fig. 3

WITNESSES:

J. J. Laasg.
Mark W. Dewey

INVENTOR:

John E. Harwood
By *Smith, Lanes & Smith*
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UNITED STATES PATENT OFFICE.

JOHN E. HARWOOD, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF TO
JOHN A. LIGHTHALL, JR., OF SAME PLACE.

TOOL-GUIDE FOR SHARPENING LAWN-MOWER KNIVES.

SPECIFICATION forming part of Letters Patent No. 462,435, dated November 3, 1891.

Application filed July 20, 1891. Serial No. 400,043. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. HARWOOD, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Gages for Sharpening Lawn-Mower Knives, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a gage designed to be applied chiefly to lawn-mower knives for the purpose of guiding the file or analogous abrading-tool employed for sharpening the knife. Inasmuch as such knives are usually spiral-shaped and are arranged to move in proximity to a stationary cutter-bar, the sharpening of the knives requires great accuracy and care, not only in regard to the bevel of the cutting-edge, but also to maintain the entire length of said edge in a cutting position with the edge of the stationary cutter-bar during the movement of the former over the latter, and for that reason the sharpening of said knives is usually effected in machine-shops.

The object of this invention is to provide simple, inexpensive, and convenient means for enabling persons to sharpen their lawn-mower knives at home and directly on the machine; and to that end the invention consists of a gage composed of a tool-guide adapted to ride on the edge of the knife to be sharpened and provided with a brace bearing on the side of knife and sustaining the guide in a uniform plane, as hereinafter more fully described, and set forth in the claims.

In the annexed drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a side view of the same mounted on a knife, and Fig. 3 is a vertical transverse section illustrating more fully its connection with the knife and the manner of using it in the operation of sharpening the knife.

Similar letters of reference indicate corresponding parts.

a represents the guide in which the file or sharpening-tool *e* is placed, as indicated by dotted lines in Fig. 3 of the drawings, said guide consisting of a suitable bed *a'*, which serves to maintain the file or sharpening-tool

in a uniform plane during its operation, and from the sides of this bed project vertically parallel flanges *a'' a''*, which guide the afore-said tool rectilineally. The bed *a'* is provided with a transverse slot *s*, which extends slightly into the bottom of the flanges *a'' a''* and is of a width to allow the said guide to ride by the bottom of its flanges on top of the cutting-edge of the knife *C* and the latter to protrude slightly through the slot, as illustrated in Fig. 3 of the drawings. From the guide *a* extends downward a breast or brace *b*, which in the operation of sharpening the rotary knife rests against the side of said knife and thus prevents the guide *a* from tilting in one direction. The brace *b* is provided with a shoulder *c*, by which it rests against the under side of the stationary knife *C'* of the lawn-mower. The guide *a* is thus firmly sustained in a uniform plane.

In sharpening the knife *C* the guide *a* is slipped successively lengthwise of the two knives *C* and *C'* to permit the file or sharpening-tool to be operated on different parts of the cutting-edge of the knife *C*.

What I claim as my invention is—

1. A gage for sharpening knives, consisting of a tool-guide adapted to ride on the edge of the knife and provided with a brace adapted to bear on the side of the knife and sustaining the guide in a uniform plane, as set forth.

2. A gage for sharpening lawn-mower knives, consisting of a tool-guide provided with a transverse slot for the protrusion of the knife-edge, and a brace on said guide adapted to bear on the side of the knife, as set forth.

3. The guide *a*, provided with the parallel flanges *a' a''* and slot *s*, and the brace *b*, extending downward from the guide and provided with the shoulder *c*, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 18th day of July, 1891.

JOHN E. HARWOOD. [L. S.]

Witnesses:

MARK W. DEWEY,
J. J. SAASZ.