G. V. PHELPS.

Machine for Sharpening Mowing Machine Knives, &c.

No. 166,629. Patented Aug. 10, 1875.

Fig. 1.

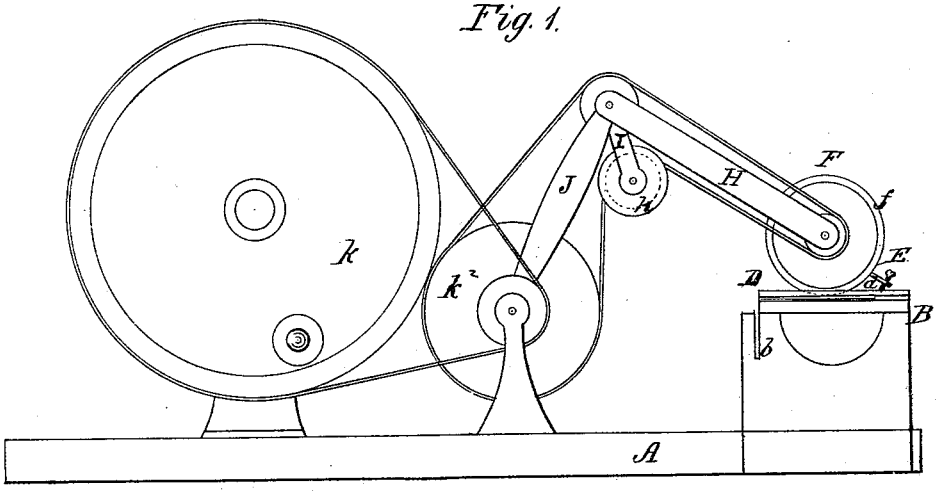
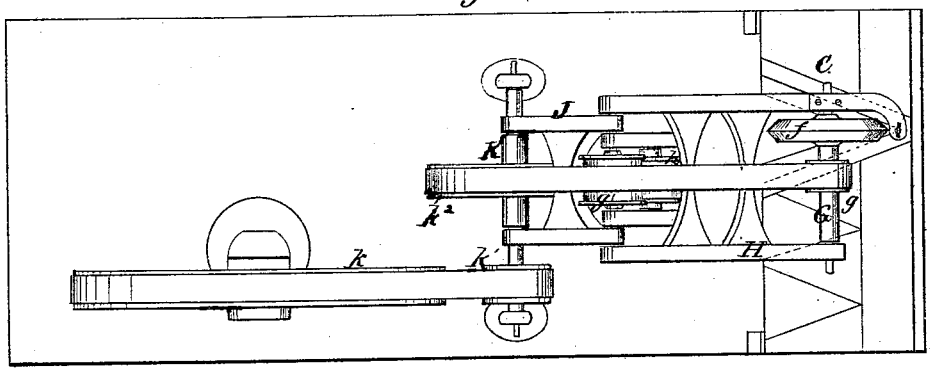


Fig. 2.



WITNESSES:

W. W. Hollingsworth

Solon C. Kemon

INVENTOR:

G. V. Phelps

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE

GILSON V. PHELPS, OF NEWARK, OHIO, ASSIGNOR TO HIMSELF AND GEORGE W. INGRAHAM, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SHARPENING MOWING-MACHINE KNIVES, &c.

Specification forming part of Letters Patent No. **166,629**, dated August 10, 1875; application filed July 6, 1875.

To all whom it may concern:

Be it known that I, GILSON V. PHELPS, of Newark, in the county of Licking and State of Ohio, have invented a new and Improved Machine for Sharpening Mowing-Machine Knives and Crosscut-Saws; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a plan view.

The invention relates to means whereby crosscut-saws and the knives of harvesters may be conveniently sharpened in a speedy and workmanlike manner.

It will first be described in connection with drawing, and then pointed out in the claims.

A represents a suitable base, on which is placed a table, B, to hold the saw in vertical grooves *b b*, or the cutter-bar of a harvester under an elastic or otherwise movable clamp, C. The latter is provided on top with a V-shaped guide, D, in which moves the traveler-pin *d*, arranged on an end-curved arm, E, and directly in front of the median convexity *f* of the double-faced and beveled grinder F. This rotary grinder is arranged on a shaft, G, having pulley *g*, and journaled in a frame, H. At the rear end of this frame is a second pulley, *g'*, while to the same is a hanging pulley, *h*, in a frame, I, pivoted to the shaft of pulley *g'*. The frame H is itself pivoted to a frame, J, which is pivoted on a pulley-shaft, K, actuated by the pulleys *k* k^1, while a large laterally-movable pulley, k^2, keyed in slot of shaft K, drives the pulleys *h g g'*.

The operation is as follows: The cutter-bar being clamped to table by piece C, the frame H is folded upward with frame I until the traveler-pin *d* is even with the heel of one edge of knife, and then is moved gradually in guide D until one face of grinder F has passed along to the vertex of the angle of knife, when it is withdrawn and the frame I slid laterally with the pulley *k* a distance equal to the base of knife. The other face of grinder then sharpens the remaining edge of knife in the same manner, the pin *d* needing no change, as it is opposite to the middle of grinder.

Having thus described my invention, what I claim as new is—

1. The described combination, with a double-faced grinder, F, of a traveling pin, *d*, in its median front, and a guide, D, on table, to operate upon both edges of a harvester-knife, in the manner set forth.

2. The combination, with grinder F, of folding frame H I J, having pulleys *g g' h* k^2, to enable the grinder to be actuated, in the manner specified.

The above specification of my invention signed by me this 18th day of June, A. D. 1875.

GILSON V. PHELPS.

Witnesses:
JAMES W. OWENS,
ABRAM WRIGHT.