No. 629,069. Patented July 18, 1899.

G. H. FOWLER.

MOWER KNIFE GRINDER.

(Application filed Apr. 3, 1899.)

(No Model.)

Fig. 1.

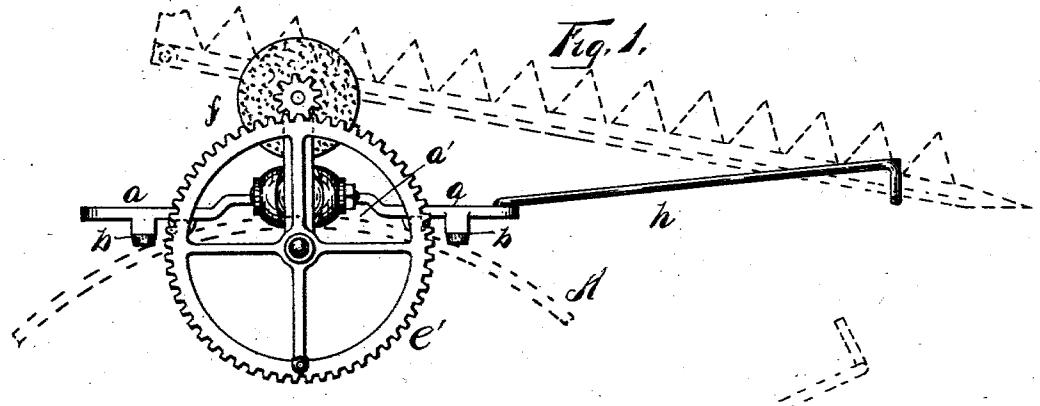


Fig. 2.

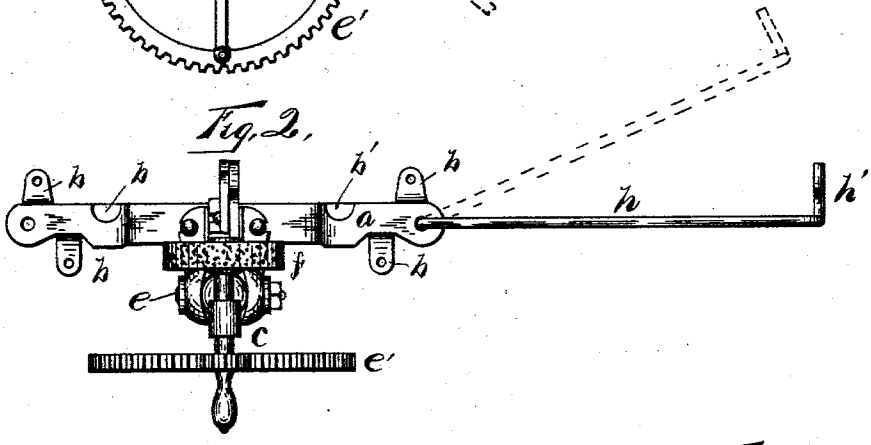


Fig. 3.

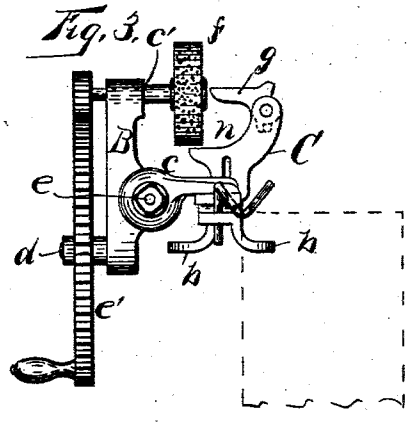
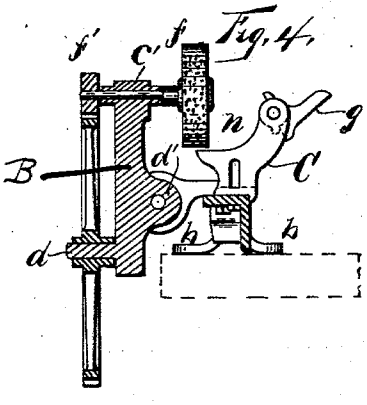


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE H. FOWLER, OF TAUGHANNOCK FALLS, NEW YORK, ASSIGNOR TO THE TAUGHANNOCK EMERY WHEEL CO., OF CORTLAND, NEW YORK.

MOWER-KNIFE GRINDER.

SPECIFICATION forming part of Letters Patent No. 629,069, dated July 18, 1899.

Application filed April 3, 1899. Serial No. 711,494. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. FOWLER, of Taughannock Falls, in the county of Tompkins, in the State of New York, have invented new and useful Improvements in Mower-Knife Grinders, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description—

My invention relates to mower-knife grinders.

My object is to improve in detail the knife-grinder mechanism shown in Letters Patent granted to me under date of February 19, 1895, No. 534,447; and to that end my invention consists in the several new and novel features of construction and operation which are hereinafter described, and specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 shows a side view of my knife-grinder attached to the drive-wheel of a mowing-machine, the driving-wheel being shown in dotted lines and the knife being ground also in dotted lines. Fig. 2 is a top plan view thereof, omitting the knife and the wheel to which it is attached. Fig. 3 is an end view of what is shown in Fig. 2, looking at it from the left. Fig. 4 is a vertical cross-section through Fig. 3, except the emery-wheel, and showing the knife-bar-rest thrown over out of the way.

Similar letters of reference indicate corresponding parts.

a is the base, having its central portion cut away from the under side, as shown at *a'*, so as to allow it to readily conform to the curvature of the driving-wheel A of the mower, and *b* are feet adjacent to each end, which rest upon the periphery of said driving-wheel. These feet are also provided with perforations, so that the base may be secured to the bench, if desired. The base is also provided with laterally-extending openings *b*, by which it may be secured by the bolts laterally across the face of the driving-wheel when it is desired to secure it for the purpose of using it in the field. The bolts (not shown) are secured to the other end and to the opposite face of the driving-wheel in any suitable and well-known manner. To the base I secure the sectional socket *c*, and B is a frame having a horizontal tubular bearing *c'* at the top, an arbor *d* at the lower end, and a ball *d'* integral with said frame, said ball fitting into the socket *c*, and *e* is a bolt passing through said socket-sections and said ball.

Upon the arbor *d* is a hand gear-wheel *e'*, and mounted in said horizontal tubular bearing *c'* is a shaft, one end of which carries the emery-wheel *f* and the opposite end a pinion wheel *f'*, adapted to engage with the wheel *e'*, so that by rotating the wheel *e* the emery-wheel *f* is rotated.

Upon the frame *a* centrally I mount a bracket C, substantially as shown in Figs. 3 and 4 of the drawings, at the upper end of which I hinge a knife-rest *g*, providing suitable means upon one side of the bracket to hold it in position. (Shown in Fig. 3.) Upon one end of the frame or in the middle of the frame *a* I pivot a swinging knife-bar holder *h*.

It will be observed that when I desire to sharpen the knives I place one end upon the rest *g*, when in position shown in Fig. 3, and allow the opposite end to rest in the curved end *h'* of the arm *h*. I can then with one hand turn the wheel which by the intermediate gearing rotates the emery-wheel, and hold the knife in position to be ground with the other hand. When the knives are ground down to the ones which are adjacent to the shoe or knife-head, I then throw the rest *g* over in the position shown in Fig. 4, which affords a recess *n* and allows the shoe upon the knife to pass into it, and thus allow me to sharpen all of the knives. It will also be observed that by the construction set forth the emery-wheel is mounted upon a joint, which permits of its lateral movement, and with one end of the knife bearing on the rest *g* and the other end resting upon the swinging arm *h* I am enabled to readily move in either direction the knife, so as to adjust itself to the face of the emery-wheel.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine of the class described, a base having means for securing it in position, a frame connected thereto, an emery-wheel mounted in said frame, means for rotating it,

a bracket mounted on said base, and having a knife-rest hinged thereto, as set forth.

2. In a machine of the class described, a base having means for securing it in position, a frame connected thereto, an emery-wheel mounted in said frame, means for rotating it, a bracket mounted on said base and having a knife-rest hinged thereto, and a swinging arm secured to either end of the base, as set forth.

In witness whereof I have hereunto set my hand this 24th day of March, 1899.

GEORGE H. FOWLER.

Witnesses:
P. F. MCALLISTER,
JOHN C. GAUNTLETT.