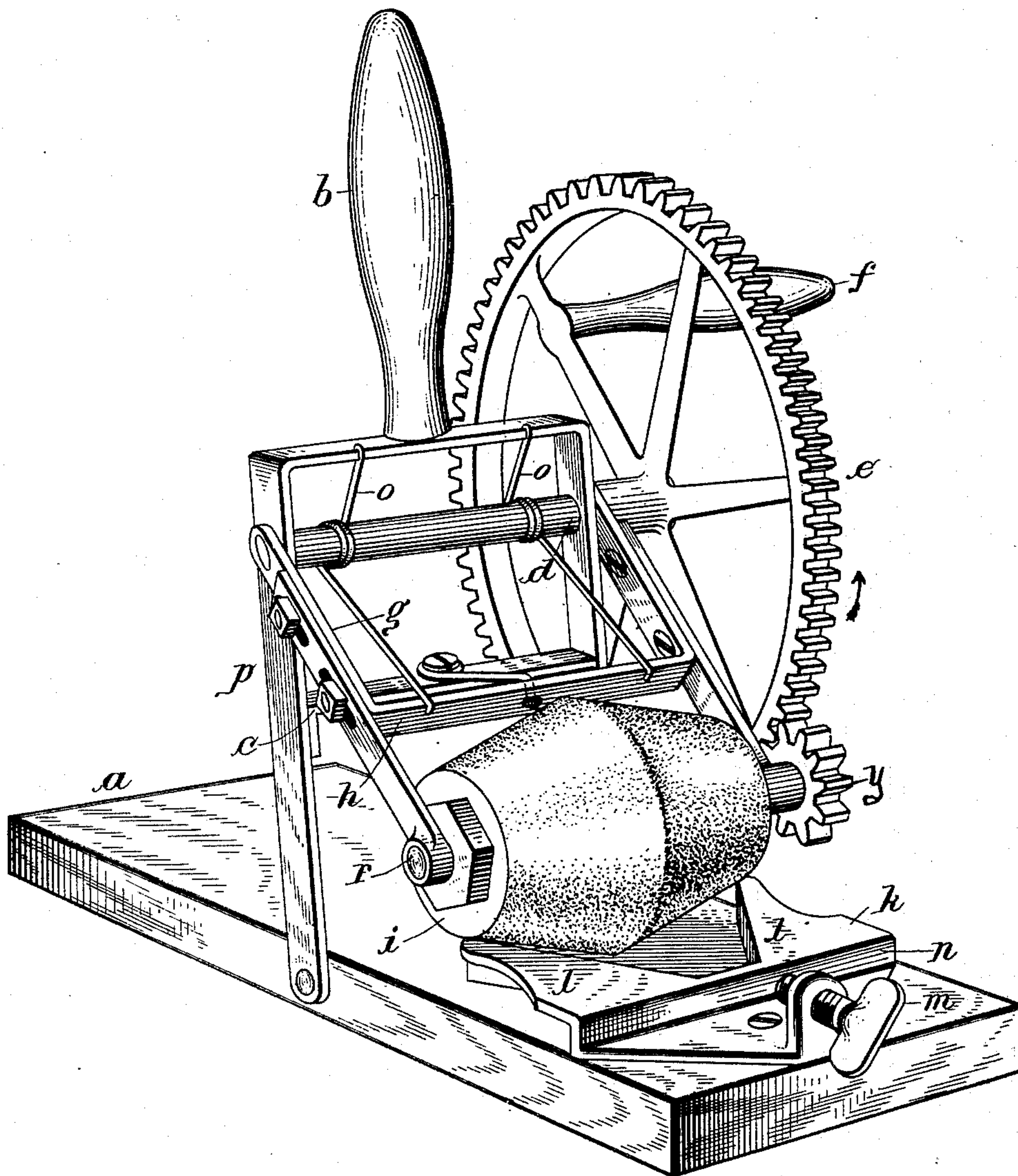


(No Model.)

J. ROGERS.  
GRINDING MACHINE.

No. 483,749.

Patented Oct. 4, 1892.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN ROGERS, OF ELKHART, INDIANA.

## GRINDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 483,749, dated October 4, 1892.

Application filed April 22, 1892. Serial No. 430,259. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ROGERS, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Grinding-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that particular class of sharpeners used on mowers, reapers, &c., wherein two edges of the knife may be ground at the same time.

My object is to produce a machine which will be more simple, convenient, and effective than those heretofore in use.

To this end my invention consists in the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claim.

The accompanying drawings represent a perspective view of my complete device.

The reference-letter *a* represents a base, upon one end of which is pivotally mounted a U-shaped supporting-frame *p*, having a handle *b* secured to the top thereof. A cross-brace *c* is placed intermediate of the top and the base *a*. Journaled in the sides of the upper part of the frame *a* is a shaft *d*, upon one side of which is a large gear-wheel *e*, turned by means of a handle *f*, although it will be seen that a belt and pulley could be attached to the shaft and the wheel driven by steam-power. Swingingly secured to the shaft *d* is a second U-shaped frame *g*, having extensions *h* secured to its sides, in the lower ends of which is journaled a shaft *r*, carrying a grinding-wheel *i* and also a small gear-wheel *y*, meshing with the wheel *e*, by means of which the grinding-wheel *i* is revolved.

The wheel *i* is made, preferably, in the form of two truncated cones placed base to base and composed of emery or other desirable

material. This form is preferable over others for the reason that when sharpening a mower-knife the stone will operate simultaneously on the two contiguous cutting-edges of the teeth.

A knife-support is *k* pivotally mounted on the base *a* in front of the wheel *i* and is provided with a pair of forwardly-extending branching arms *l*, the space between them being made wider than the distance between the blades of a mower-knife, so that, while they support the blades, yet they do not interfere with the action of the grind-wheel *i*.

A horizontal thumb-screw *m* operates in a post rising from the rear edge of the support for the purpose of clamping the usual lug on the under side of a mower-knife against the shoulder *n* on the knife-support.

Springs *o*, wound around the shaft *d*, their free ends bearing against the frames *p* and *g*, tend to keep the grind-wheel in constant contact with the knife when operating.

The support *k* is pivoted on the base, so that if the operator wishes he may grind only one blade by swinging the support to that side.

When using my device, the knife to be sharpened is secured on the support *k* by the thumb-screw *m* and the grind-wheel *i* pushed forward by the handle *b* until it rests upon the knife. The gear-wheel *e* is revolved by means of the handle *f*, the movement of the wheel *e* revolving the grind-wheel *i* through the medium of the gear wheel or pinion *y*. The gear-wheel *e* is revolved in the direction of the arrow, which direction would tend to allow the grind-wheel *i* to climb on the knife; but the wheel is kept in its proper position by means of the springs *o* and the handle *b*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, in a grinding-machine, of a base, a main frame pivoted directly thereon, a shaft journaled in said frame, said shaft carrying a power-wheel, a secondary frame pivoted to said main frame, said secondary frame carrying a grind-wheel having a pinion on one end of its shaft, which meshes

with said power-wheel, whereby motion is transmitted from the power-wheel to the grind-wheel, and springs coiled around said shaft, their ends bearing against the main and  
5 secondary frames, respectively, whereby the grind-wheel is kept in position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ROGERS.

Witnesses:

ORNO M. CONLEY,  
ORRIN Z. HUBBELL.