

(No Model.)

O. MUSSINAN, Jr.  
SHARPENER FOR PENCILS, &c.

No. 369,652.

Patented Sept. 6, 1887.

Fig. 1.

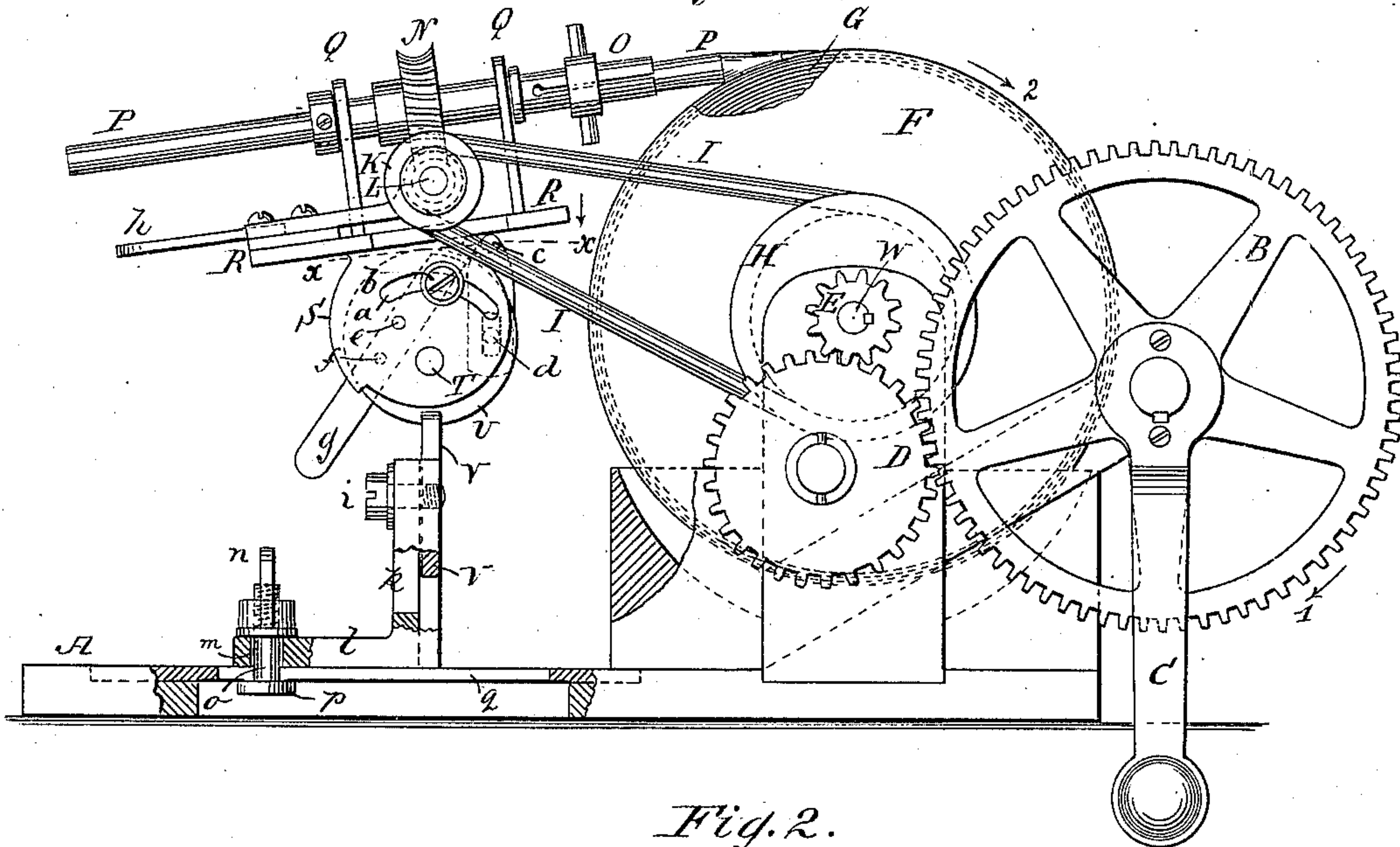


Fig. 2.

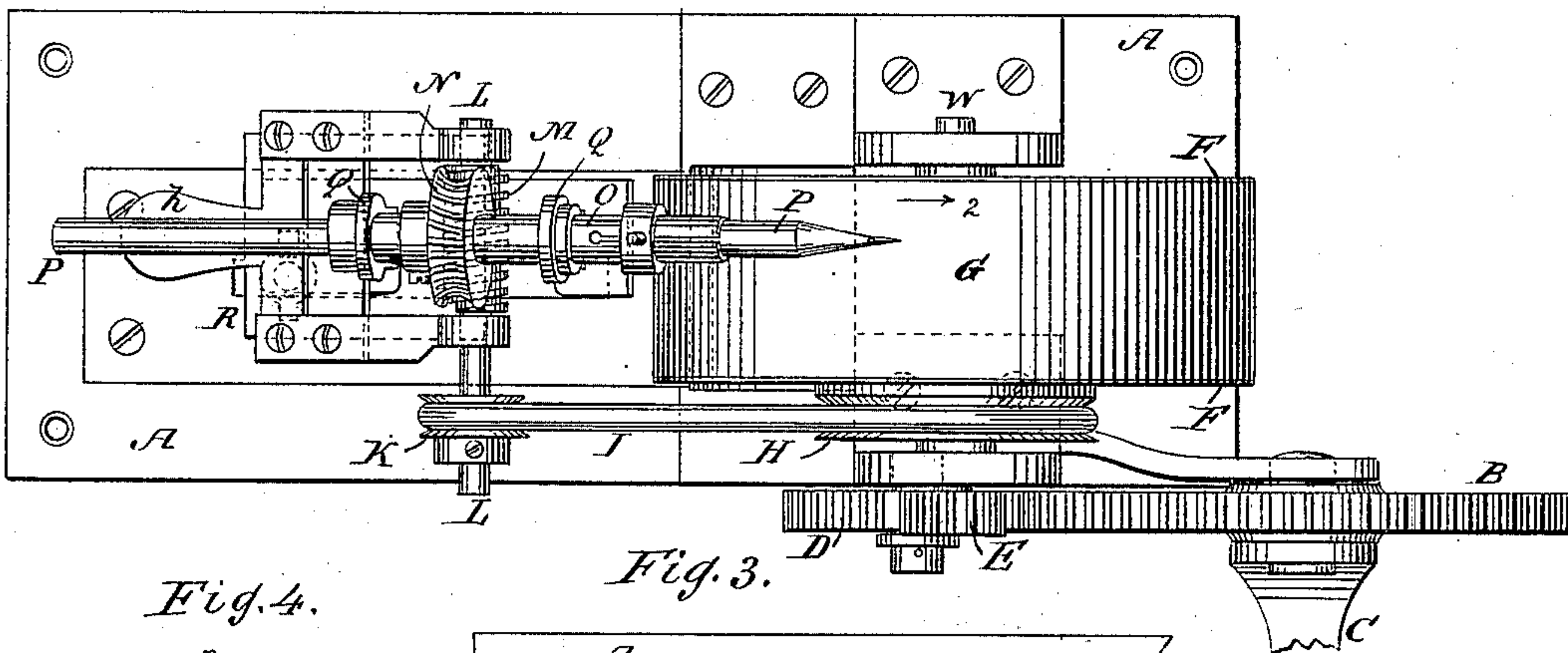


Fig. 3.

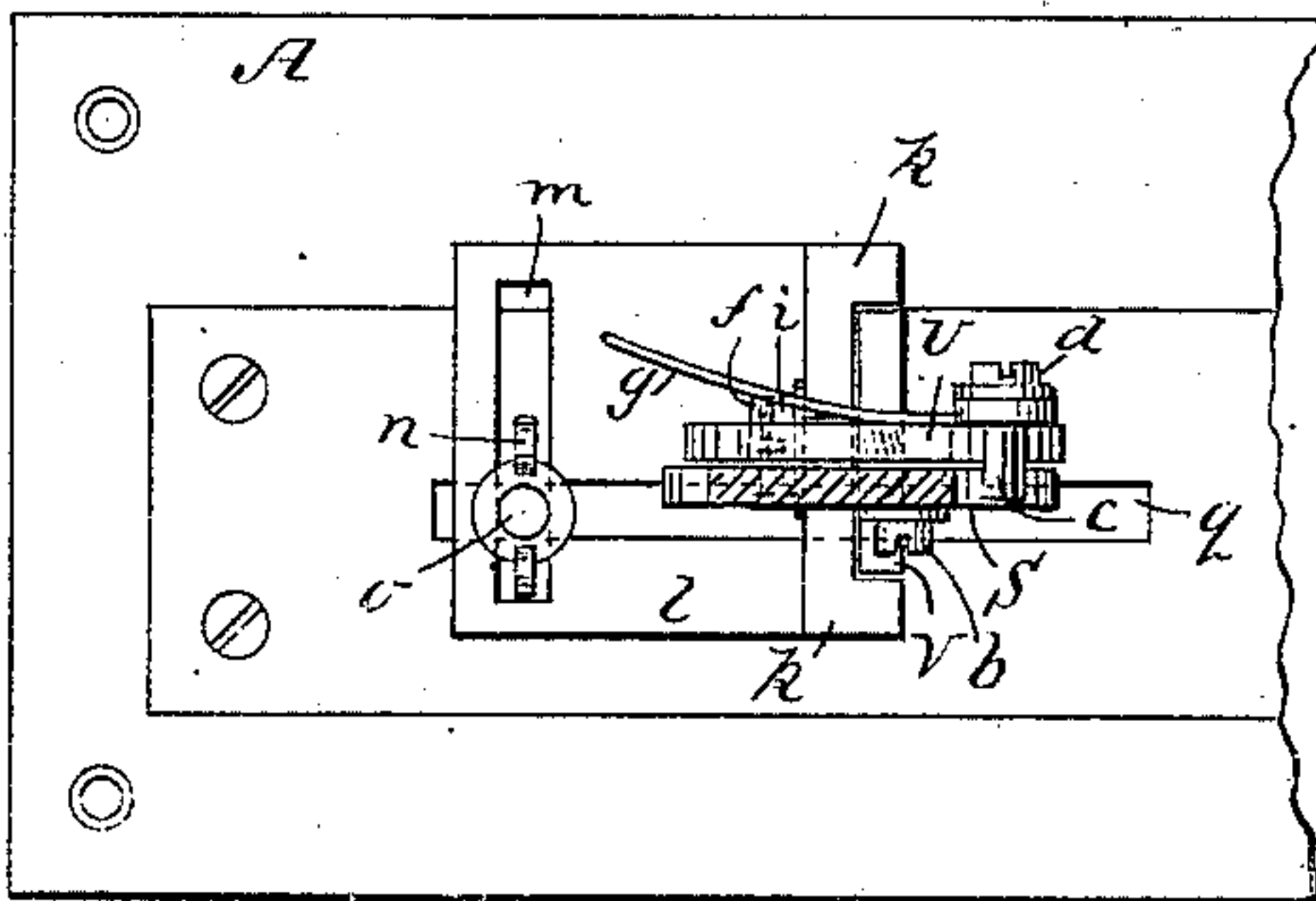
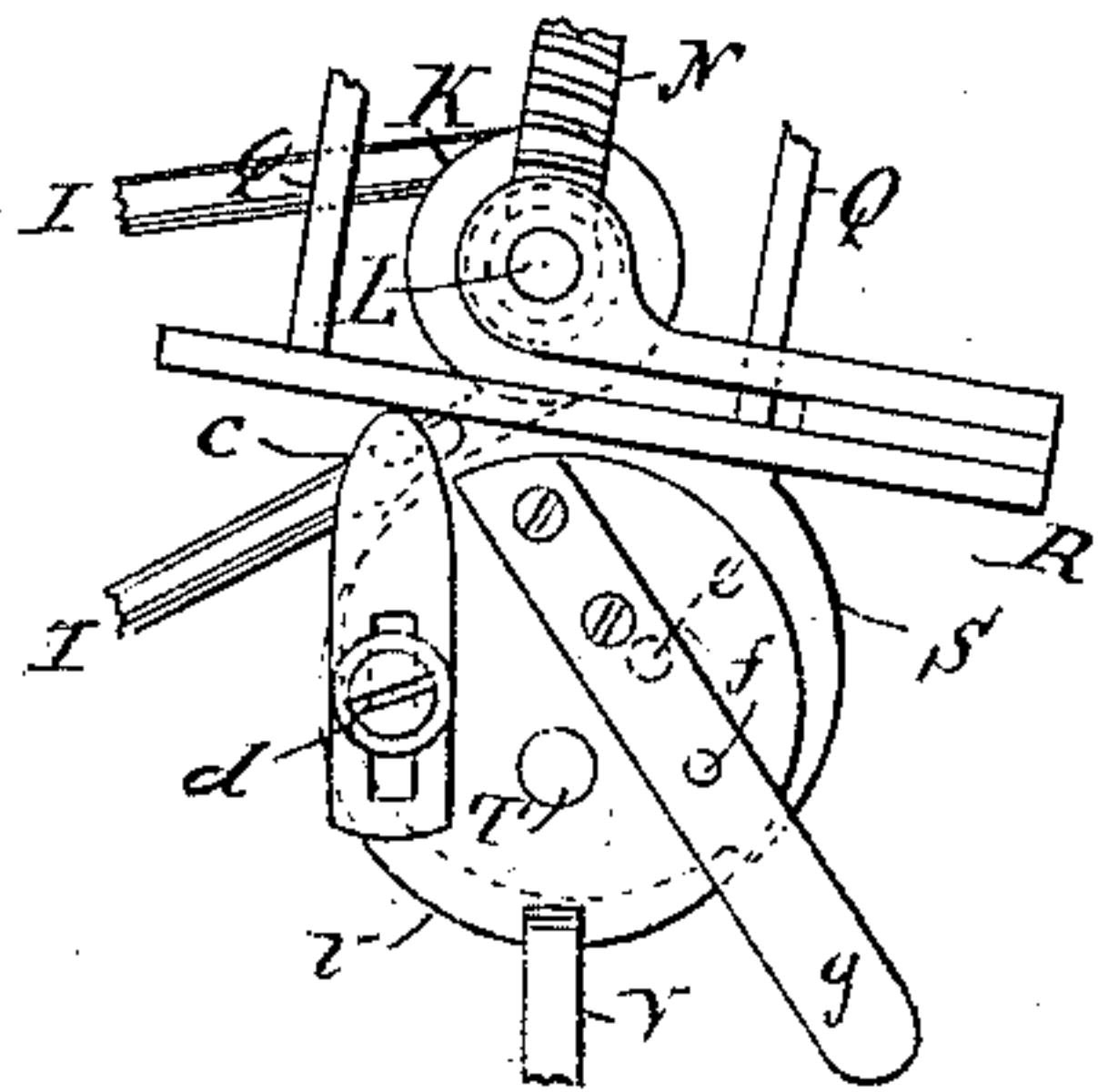


Fig. 4.



WITNESSES:

Eduard Wolff.  
William Miller

Fig. 5.

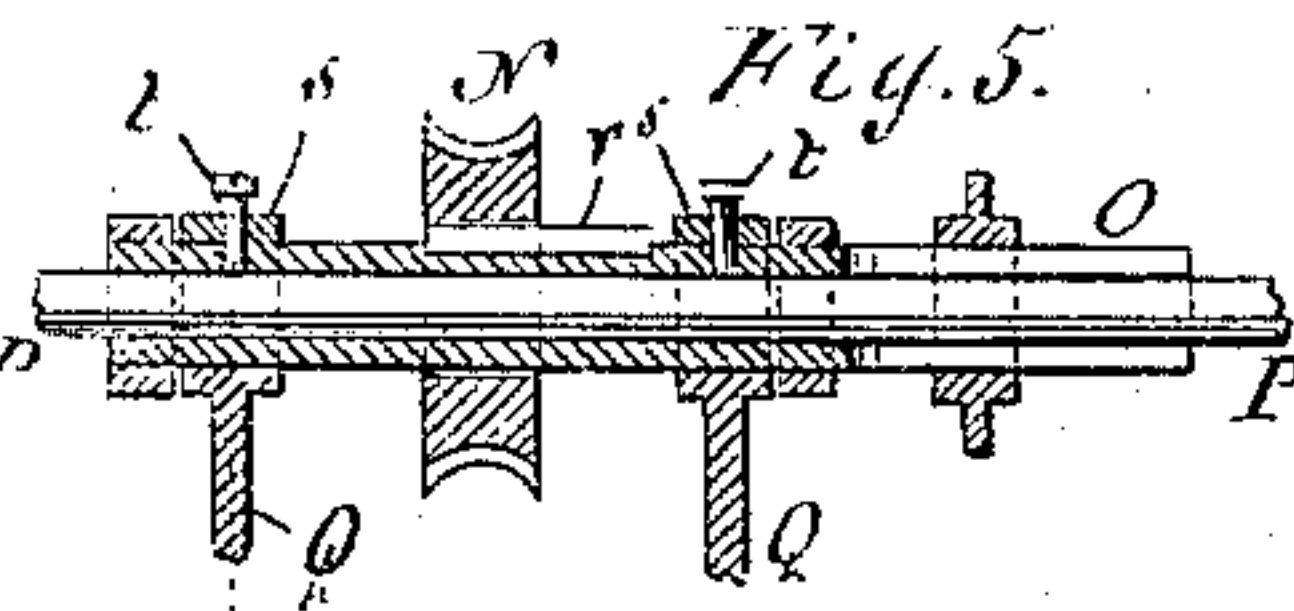
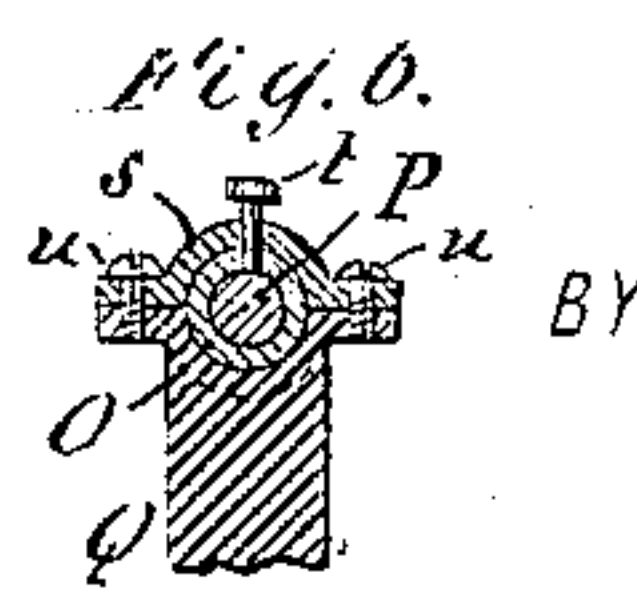


Fig. 6.



INVENTOR

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# UNITED STATES PATENT OFFICE.

OSCAR MUSSINAN, JR., OF NEW YORK, N. Y.

## SHARPENER FOR PENCILS, &c.

SPECIFICATION forming part of Letters Patent No. 369,652, dated September 6, 1887.

Application filed April 7, 1887. Serial No. 234,025. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR MUSSINAN, Jr., a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Sharpeners for Pencils and other Articles, of which the following is a specification.

This invention relates to improvements in sharpeners for lead-pencils, crayons, slate-pencils, and other articles, as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a pencil-sharpener, partly broken away. Fig. 2 is a plan view of a pencil-sharpener. Fig. 3 is a section in the plane  $xx$ , Fig. 1. Fig. 4 is a detail view of a support for a holder, seen from the opposite side from that shown in Fig. 1. Figs. 5 and 6 show modifications, hereinafter referred to.

Similar letters indicate corresponding parts.

In the accompanying drawings, the letter A designates a base or support.

B is a gear-wheel to which rotation can be imparted by suitable means, such as a handle or crank, C. By rotating the gear-wheel B in the direction of arrow 1, Fig. 1, motion is communicated from the gear-wheel B, through the gear-wheel D, to the gear-wheel E, connected to the grinding or sharpening disk G, or to the axle or core W of the grinding-disk G. The sharpening or grinding disk G is thus caused to turn in the direction of arrow 2. An article—such as a crayon or pencil, P—can thus be sharpened or pointed by being held in proper contact with the disk G. In the drawings the sides of the disk G are shown as being covered or protected by suitable material, F—such as paper or cloth—pasted or otherwise secured to the sides of the disk G.

The pencil or article P is shown as being held by a suitable clamp or holder, O, provided with a worm-wheel, N. The worm-wheel N gears into the worm M on the axle L. The pulley K of the axle L is connected by a belt, I, with a pulley, H, connected to the disk G. The rotation of the disk G thus imparts motion to pencil P, causing said pencil to turn about its longitudinal axis. The pencil is thus symmetrically acted upon by the sharpening-disk G. The belt I is made of elastic ma-

terial—such as india-rubber—so that the tension of the belt I will tend to draw the frame Q of the holder O toward the disk G, thus bringing the pencil or article P into contact with the disk G.

The frame Q is mounted on a base, R, having a movable support, S. The support S is adapted to move or oscillate about the pivot T, so that the tension of the belt I can move the support S and frame Q to carry the pencil or article P into contact with the disk G.

The pivot T connects the movable support S to the fixed support U. An arm or stop, c, is applied to the fixed support U, so as to limit the motion of the frame Q toward the disk G. By means of a set-screw, d, secured to the support U and passing through a slot in the stop c, the stop c can be adjusted as required.

From the fixed support U extends a stud, b, entering a segmental slot, a, in the movable support S. The slot a and stud b limit the swinging motion of the pivoted support S and frame Q away from the disk G. A handle, h, secured to the base R, enables the frame Q to be moved away from the disk G against the resistance or tension of the elastic belt I.

The frame Q can be locked in a position with the pencil or article P at a distance from the disk G. The locking device consists of a spring, g, secured to the fixed support U and provided with a stud, f. When the frame Q and movable support S have been carried so far away from the disk G that the eye or perforation e in the movable support S comes opposite the stud f, said stud f will engage the eye e and will hold the support S and frame Q away from the disk G. As the belt I is elastic, said belt can readily yield to the motion of the frame Q, and said belt can be given such tension as to draw the pencil or article P to the disk G, and to secure rotation of the worm M and the worm-wheel N.

The fixed support U is carried by an arm or upright, V. The arm or upright V is tapped for the reception of a screw, i, which secures the upright V to an arm, k. By having the screw i adapted to move in a slot in the arm k the upright V can be vertically adjusted.

The arm k has a foot, l, provided with a slot, m. Through the slot m passes the shank o of a jam-nut, n. The slot m and screw n enable



the foot *k* to be laterally adjusted and fixed as desired.

The shank *o* of the screw *n* is adapted to travel in a slot, *q*, in the base *A*. A shoulder, *p*, on the shank *o* prevents the shank from losing its engagement with the slot *q*. The slot *q* and screw *n* enable the foot *l* to be longitudinally adjusted and fixed as desired.

The adjustability of the various parts *V* and *k* enables the frame *Q* to be adjusted in any direction to bring the pencil or article *P* into proper position relatively to the disk *G*.

The disk *G* can be readily formed by winding a strip of grinding material—such as sandpaper, porcelain-paper, or emery-paper—about the axle or core *W*. As the exposed portion of the strip becomes worn out, a new portion can be exposed by simply removing or tearing off the worn part of the grinding-strip. An efficient grinding surface can thus be readily brought to act on the pencil or article *P*. As the diameter of the disk *G* becomes smaller through the removal of worn-out portions of the strip, the frame *Q* can be adjusted so as to keep the pencil or article *P* in contact with the disk *G*.

The specific construction of disk is not claimed in this application, as I reserve the right hereafter to apply for and obtain a patent for such construction of disk.

It is evident that the device can be used not only for sharpening crayons, pencils, and similar articles, but also other articles, such as pins, needles, knife-blades, and other articles. In case articles as knife-tools or cutting-edges are sharpened, the rotary motion of the holder *O* should at times be omitted. To stop the rotary motion of the holder *O*, the worm-wheel *N* is taken out of gear with the worm *M*. In Fig. 5 a feather, *r*, is shown as securing the worm-wheel *N*, so that said worm-wheel is free to move along the holder *O* into or out of gear with the worm *M*. A pin or stop, *t*, can be inserted into the frame *Q*, so as to strike against or engage the holder *O* when it is desired to stop the rotation of the holder *O*.

The holder *O* may be held in place by caps *s* on the frame *Q*. When the holder *O* is to

be removed from the frame *Q*, the screws or fastenings *u* of the caps *s* are removed and the caps *s* are taken off the frame *Q*, when the holder *O* can be removed.

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

1. The combination, with a grinding-disk, *G*, of the frame *Q*, the rotary holder *O*, having a worm-wheel, *N*, the rotary axle *L*, having the worm *M* for turning the worm-wheel and holder, and means, substantially as described, for moving the holder toward and from the periphery of the grinding-disk.

2. The combination, with a grinding-disk, of a holder, *O*, provided with a movable support, *S*, a stop, *c*, and a locking device, *f*, for said support *S*, substantially as set forth.

3. The combination, with a grinding-disk, *G*, of the frame *Q*, the holder *O*, gears *M N*, for rotating the holder, the pivoted swinging support *S*, the vertically-adjustable upright *V*, and means, substantially as described, for adjusting the said upright laterally and toward and from the grinding-disk.

4. The combination, with a grinding-disk, of a holder, *O*, provided with a movable support, *S*, stops *b c*, and a locking device, *f*, for said support *S*, substantially as set forth.

5. The combination, with a grinding-disk, of a holder, *O*, and gears *M N*, made to connect the holder to the disk, said gears being adapted to be moved into and out of gear with one another, substantially as set forth.

6. The combination, with a grinding-disk, of a holder, *O*, adapted to rotate, and a stop, *t*, adapted to check the rotation of the holder, substantially as set forth.

7. The combination, with a grinding-disk, of a holder, *O*, a frame, *Q*, for said holder, and removable caps *s*, adapted to keep said holder in place, substantially as set forth.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

OSCAR MUSSINAN, JR. [L. S.]

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.