(No Model.)

W. P. MAYES.

PENCIL SHARPENER.

No. 525,083. Patented Aug. 28, 1894.

FIG. 1.

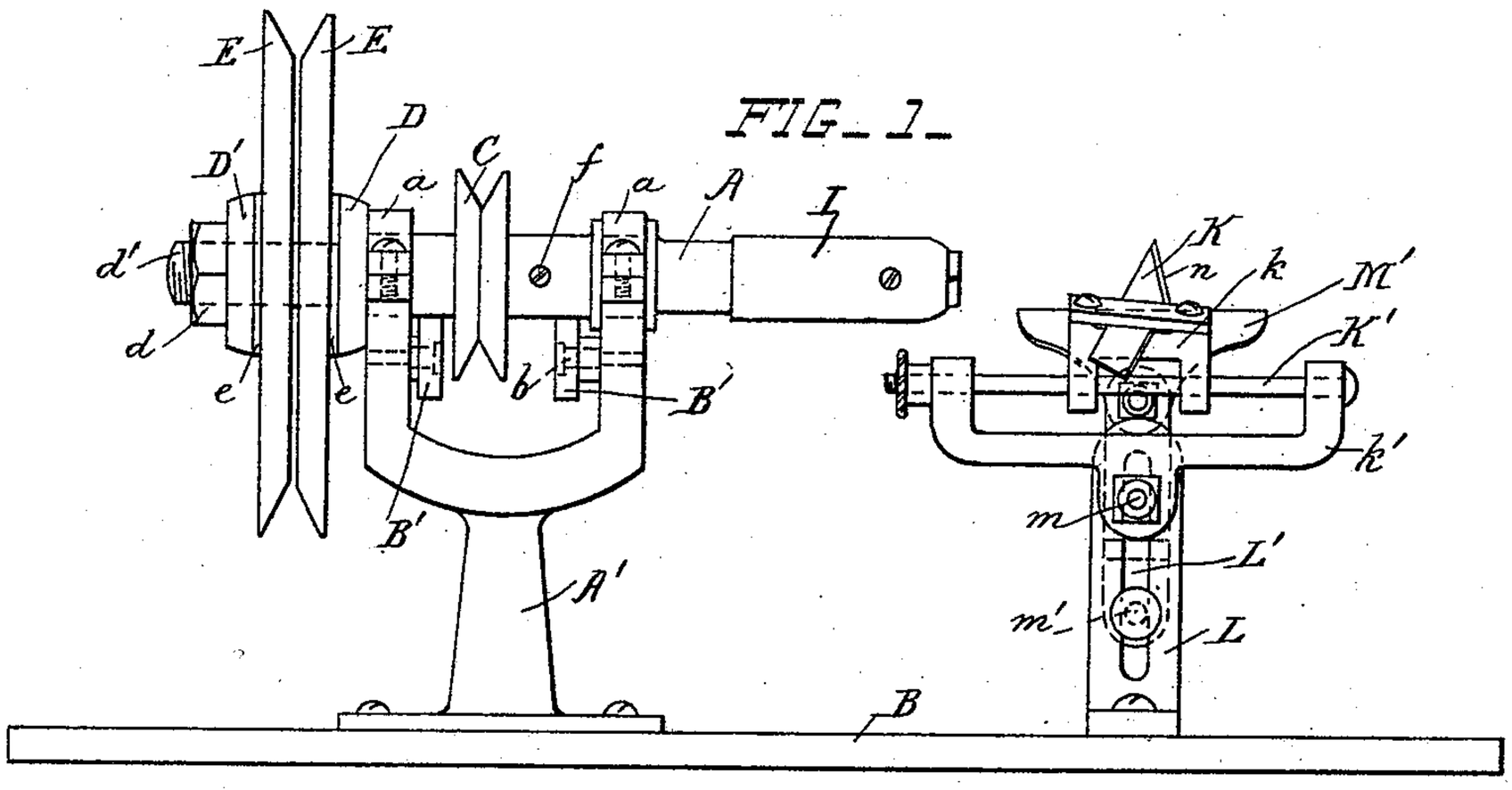


FIG. 2.

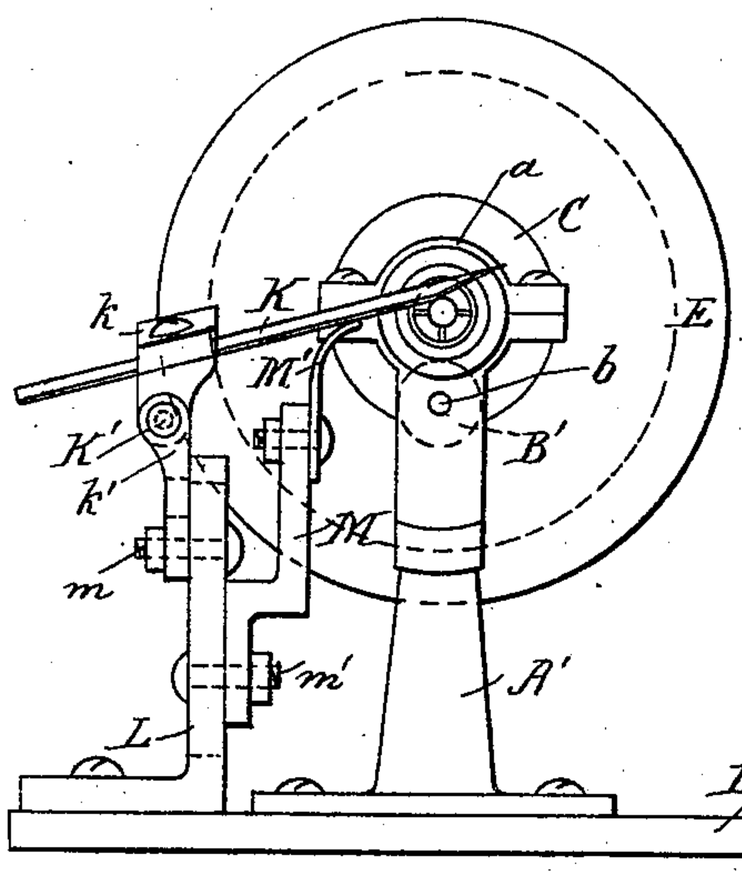


FIG. 4.

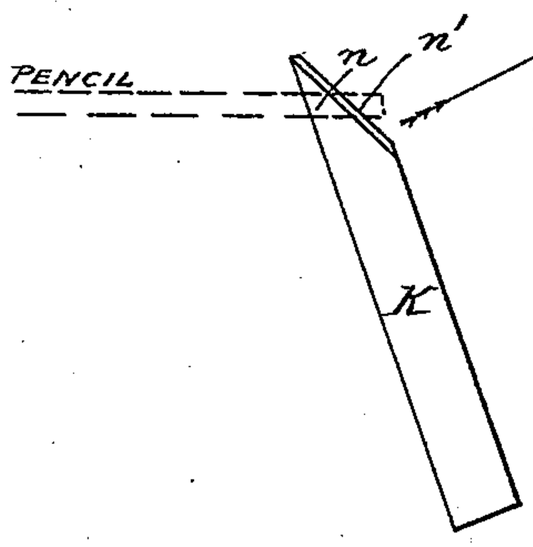


FIG. 5.

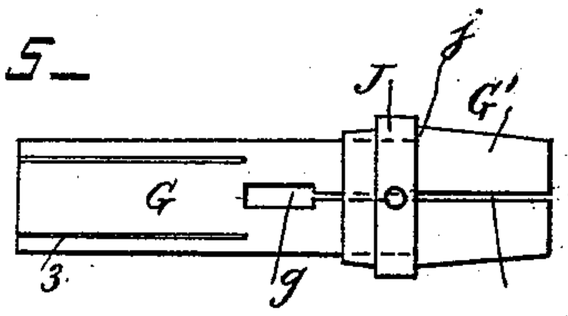
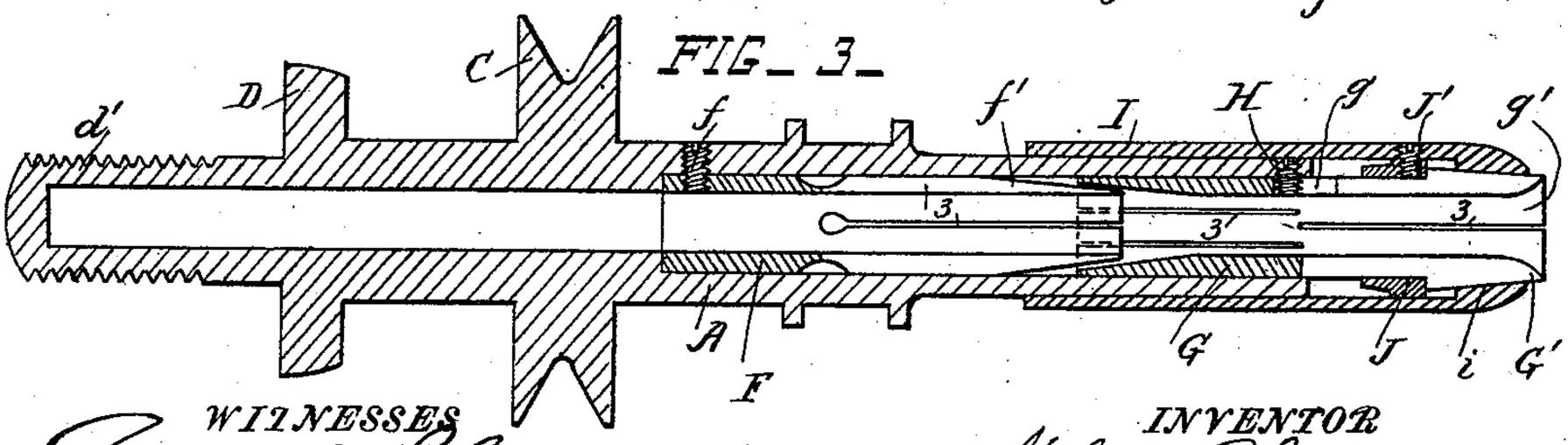


FIG. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILTON P. MAYES, OF TERRE HAUTE, INDIANA, ASSIGNOR OF ONE-HALF TO PETER N. STAFF, OF SAME PLACE.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 525,083, dated August 28, 1894.

Application filed December 14, 1893. Serial No. 493,675. (No model.)

To all whom it may concern:

Be it known that I, WILTON P. MAYES, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Pencil-Sharpeners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to pencil sharpeners; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings: Figure 1 is a side view of the pencil sharpener. Fig. 2 is an end view of the same. Fig. 3 is a longitudinal section through the pencil holder. Fig. 4 is a plan view of the knife for sharpening the pencils. Fig. 5 is a detail side view of the sliding collar and tube of the pencil holder.

A is a hollow shaft journaled in the bearings *a* of the bracket A′ which is secured to the base B. B′ are anti-friction rollers journaled on the pins *b* which project from the bracket A′. The rollers B′ bear against the under side of the shaft A and steady it.

C is a cord pulley by means of which the shaft A is revolved.

D is a stationary collar on the shaft A, and D′ is a sliding washer. A nut *d* engages with the screwthreaded end *d′* of the shaft.

E E are two emery wheels or disks having conical peripheries. These disks are placed on the shaft A side by side so as to form a single grinding wheel provided with a V-shaped groove. Washers *e* of soft material, such as leather, are interposed between the disks E and the collar and washer, and the nut *d* secures the said disks upon the end of the shaft. This emery grinding wheel is provided for sharpening slate pencils and pointing lead pencils.

F is a tube secured inside the shaft A by the screw *f*, and provided with a conical front end *f′* having longitudinal slots 3 in it, so that the said end forms a spring clip.

G is a tube which slides in the shaft A, and which is provided with longitudinal slots 3 in each end, similar to the slots in the tube F.

H is a stop screwed into the shaft A and projecting into a slot *g* in the tube G so as to limit the longitudinal movement of the said tube and constrain it to revolve with the shaft.

G′ is a conical front end portion formed on the tube G and which constitutes a second spring clip; and *g′* is a small bell mouth to the tube G.

I is the outer tube which slides on the shaft A, and is provided with a conical end portion *i* adapted to engage with the spring clip or end portion G′ of the tube G.

J is a collar which slides on the sliding tube G between the end of the shaft A and the shoulder *j* where the end portion G′ joins onto the tube G.

J′ is a screw which secures the outer tube I to the collar J. When the outer tube is pulled as far forward as possible, and the parts are in the positions shown in Fig. 3 of the drawings, the two spring clips *f′* and G′ are expanded. The pencil to be sharpened is thrust up the tubes G and F. The outer tube I is then pushed back as far as possible. The first effect of this is to contract the spring clip G′ upon the pencil by means of the portion *i*. The continued sliding motion of the outer tube then pushes back the sliding tube G and contracts the spring clip *f′* upon the pencil by means of the rear end of the tube G which slips over the conical portion of the said clip. The collar J slides back and forth and prevents the outer tube from coming off the end of the shaft. The pencil is sharpened by means of a knife pressed against it while it is being revolved by the shaft A.

K is the knife which is clamped to the carrier *k*. The carrier is pivoted on the rod K′ carried by the bow-shaped bracket *k′*, and the carrier is free to slide longitudinally on the rod K′.

L is a vertical supporting bracket secured to the base B, and provided with the slot L′. The bracket *k′* is secured to the bracket L by a single bolt *m* which passes through the slot L′, so that the bracket *k′* may be adjusted vertically and set to any desired angle.

M is an adjustable bracket secured to the bracket L by a single bolt *m′*, and M′ is the knife rest secured to the upper end of the bracket M. The knife K is provided with a beveled end *n*, the edge *n′* of which is sharp.

The edge n' is slid along the projecting end of the pencil and cuts it to a point as the pencil is revolved.

Fig. 4 shows the preferred position of the knife when in the act of cutting and the arrow indicates its direction of motion to produce a shearing cut.

What I claim is—

1. In a pencil sharpener, the combination, with the hollow shaft provided with a gripping device for holding the pencil, and means for revolving it; of a support for the shaft to run in, a base plate secured to the said support, a bracket secured to the base plate, an adjustable knife rest secured to the said bracket, the adjustable bow-shaped bracket also secured to the aforesaid bracket and provided with a pivot rod, the carrier sliding on the said pivot rod, and the knife secured to the carrier, substantially as set forth.

2. In a pencil sharpener, the combination, with the revoluble hollow shaft, of two tubular spring clips revolving with the shaft, and a longitudinally-sliding outer tube for operating the spring clips, whereby the pencil is clipped in two places, substantially as set forth.

3. In a pencil sharpener, the combination, with the revoluble hollow shaft, of the inner tube secured to the shaft and provided with the spring clip f', the sliding tube G adapted to operate the said spring clip and provided with the spring clip G′ at its front end, and the slot g; the stop secured to the said shaft and engaging with the slot g, a collar sliding on the tube G, and the outer tube secured to the said collar and provided with a front end portion i adapted to operate the spring clip G′, substantially as set forth.

4. In a pencil sharpener, the combination, with the knife provided with a beveled end n, of the sliding carrier secured to the said knife, an adjustable bow-shaped bracket provided with a pivot rod for supporting the said carrier, an adjustable knife rest, and a bracket supporting the said bow-shaped bracket and knife rest, substantially as set forth.

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

WILTON P. MAYES.

Witnesses:
PETER N. STAFF,
M. S. EVINGER.