

T. H. MULLER.

Machines for Finishing Pencils.

No. 140,946.

Patented July 15, 1873.

Fig. 1.

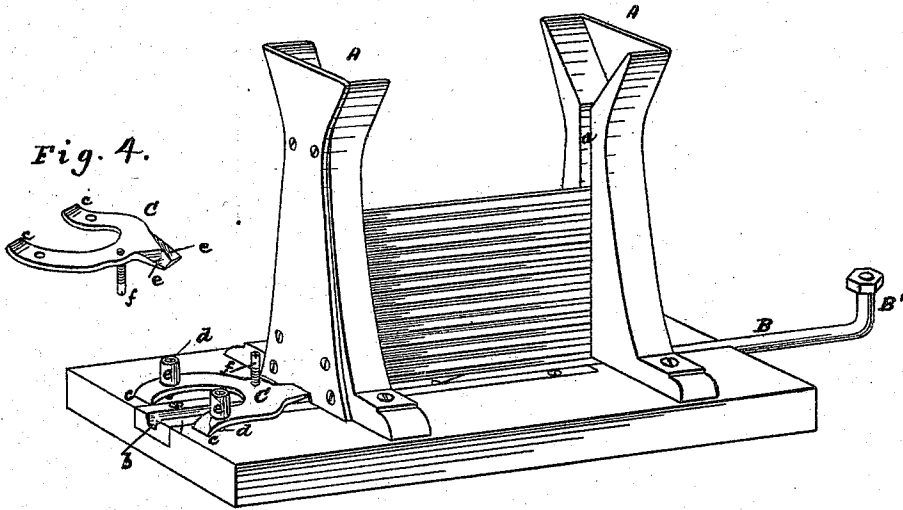


Fig. 2.

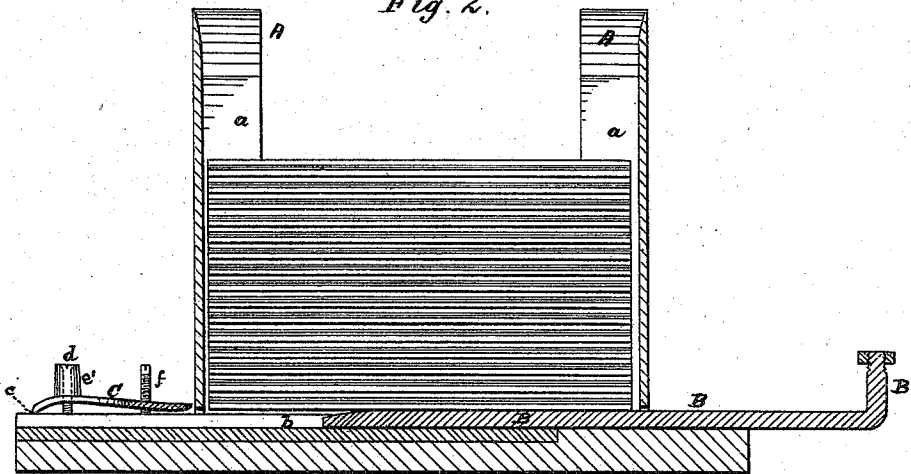
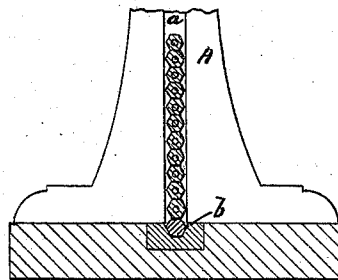


Fig. 3.



Witnesses

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TEILE H. MÜLLER, OF YONKERS, NEW YORK.

IMPROVEMENT IN MACHINES FOR FINISHING PENCILS.

Specification forming part of Letters Patent No. **140,946**, dated July 15, 1873; application filed May 28, 1873.

To all whom it may concern:

Be it known that I, TEILE H. MÜLLER, of Yonkers, Westchester county, New York, have invented certain new and useful Improvements in Mechanism for Finishing Lead-Pencils, Pen-Holders, &c., of which the following is a specification:

In the self-feeding mechanisms which usually accompany machines for finishing lead-pencils, &c., such as polishing-machines, heading-machines, varnishing-machines, the pencils are placed in a hopper, whence they pass down through a throat into a groove or guiding-channel, along through which they are carried to the operating parts of the respective machinery to which they are to be fed.

For a round pencil having a cylindrical cross-section, the position of the pencil in the groove or guiding-channel makes no difference; but in the case of the hexagonal or octagonal pencil, or a pencil of any cross-section deviating from the cylindrical, it is required that the pencil shall be presented to the machine which operates on it always in the same position as regards its exterior—that is to say, its exterior faces must always lie in certain predetermined planes, from which they should not depart as the pencil is fed along, and each pencil should occupy precisely the same position, in this respect, as the one preceding it. This is necessary not only when the pencils are to be headed, but also when they are fed to the vessel containing the varnish in varnishing-machines, or to the polishing-dies, &c.

The object of my invention is to cause the pencils as they are fed along to unerringly assume the proper position above specified; and to this end I place in front of the hopper, over the groove or channel in which the pencils successively drop from the hopper, a yielding guide arm or spring, the part of which facing the hopper is shaped substantially as herein-after described, so as to turn the pencil on its axis, in case of any irregularity in the position of the same, in order to bring it to the proper and predetermined position in which it must pass to the operating parts of the machine. The pencils, as they successively drop from the hopper into the feed channel or groove, are pushed along toward and under the guide, and it is by contact with the front end of the lat-

ter that they are all compelled to assume the same position.

The manner in which my invention is or may be carried into effect will be readily understood by reference to the accompanying drawing, in which—

Figure 1 represents so much of the feeding mechanism as needed to illustrate my invention. Fig. 2 is a longitudinal vertical central section of the same. Fig. 3 is a transverse vertical section of the same, the top of the hopper being broken off. Fig. 4 is an under-side view of the yielding or adjustable guide or spring detached.

A is the hopper, into the throat *a* of which the pencils drop, ranging themselves one above the other, as seen in Fig. 1. Immediately beneath, and in the plane of the hopper-throat, is formed in the base-plate a channel, *b*, having a cross-section, such as shown in Fig. 3, adapted to fit the lower half of a hexagonal pencil, which should rest in the channel, with one of its sides on the bottom of the channel. The pencils are pushed along by a reciprocating rod, B, which runs in the channel, and is connected by a pitman at its end B' to a crank driven by suitable power. In its rearward movement the rod B is drawn out entirely from under the pencils, thus permitting those in the throat to descend, and consequently a pencil to fall into the channel, there being space enough between the lower end of the throat and the bottom of the channel for one pencil only. The forward movement of the rod pushes this pencil out from under the hopper through the channel to the heading, varnishing, polishing, or other machine with which the feeding mechanism is used.

It happens at times, with pencils of polygonal cross-sections, that they will not drop squarely into the channel, and will rest therein on one of their edges, or in a position other than that which they should occupy. The object of my invention is to prevent this occurrence; and to this end I place in front of the hopper, and over the channel, a guide, C, either in itself a spring, or held down with a yielding pressure. The arrangement of this guide may vary. I have shown what, on the whole, I have found to be the most desirable mode of arranging it. In this instance the

guide is a lever, having its fulcrum at *c*, and held down at *d* between its front end and its fulcrum by springs *e'*. These springs are of rubber or other suitable material, encircling headed pins *d* passing through holes in the lever, and screwing into the base-plate. These screws may be turned in or out to adjust the tension of the springs. It is by means of the front end of this lever that the position of the pencils is assured and corrected. The shape of this front end will differ slightly, according to the kind of pencil operated on. The shape shown in the drawing is designed for hexagonal pencils. The end is beveled or turned upward from rear to front. It is also beveled from the center toward each side, forming the two faces *e*, inclining downward toward a center line, as shown in Fig. 4. The hexagonal pencil should pass to the heading or other machine with one flat side up, and it will be seen that the above-described formation of the lever insures this. As soon as the pencil is shoved out from the hopper it enters under the front end of the lever. If the pencil occupies a correct position it will pass along without change; but in case it does not lie flat, but rests on one of its edges, or in such position as to have one of its corners or edges uppermost, this corner will strike one or the other beveled faces *e* of the lever, and the pencil will thereby be turned, so that by the time the front end of the pencil has reached the end of the beveled face *e*, the pencil will be thrown on its flat side, thus bringing a flat side uppermost.

I employ with the guide *C* a set-screw, *f*, near the front end, by means of which the lever is set to such a height above the bottom of the channel that the polygonal pencil, when in the correct position, just passes under it without friction, in order not to mar or injure the polished surface.

For pencils of a very decided section, such as square or even hexagonal, the simple upward beveling of the front end of the lever might suffice; but for octagonal pencils, &c., a wedge-shaped bevel is very necessary for good work.

For pentagonal or other sections with an uneven number of sides which may be worked with one corner up, the front end of the lever should be hollowed out or concaved to conform in shape with the cross-section of the upper part of the pencil which passes under it.

The guide-lever is attached to the mechanism in such position as to operate upon the pencil before it passes to the feed-rollers or other part of the machine to which the pencils are to be fed.

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

1. In pencil-feeding machinery, a yielding or adjustable pencil-guide, arranged in front of the pencil-hopper, so that the pencils, as they are fed therefrom, shall successively pass under it, and formed on its under side with one or more inclined surfaces adapted to operate upon the pencils passing beneath, substantially as and for the purposes set forth.

2. The combination of the yielding and adjustable pencil guide-lever with the pencil-hopper and the feed groove or channel beneath said hopper and lever, the whole arranged, for joint operation, substantially as shown and set forth.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

TEILE H. MÜLLER.

Witnesses:

JOHN BULKLEY,
HARRY COLEMAN.