(No Model.)

W. G. PRICE.

PENCIL SHARPENER.

No. 492,336. Patented Feb. 21, 1893.

FIG. 1.

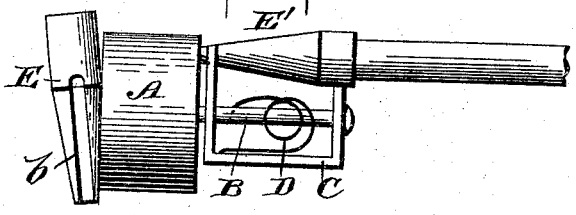


FIG. 2.

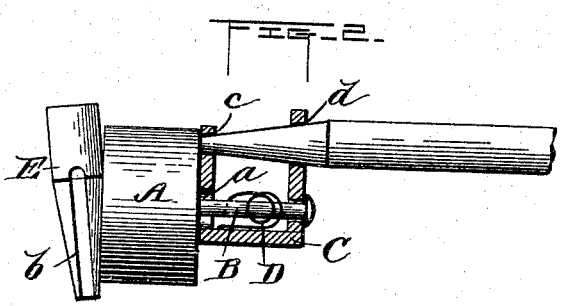
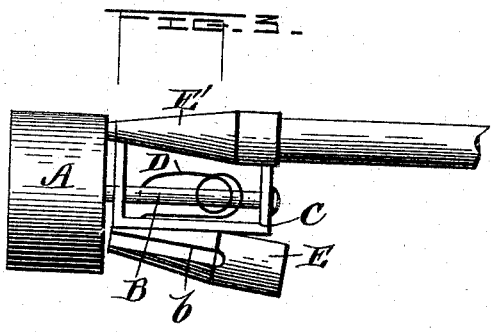


FIG. 3.



Witnesses:
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C. Hines.

Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM G. PRICE, OF WATERBURY, CONNECTICUT.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 492,336, dated February 21, 1893.

Application filed August 6, 1892. Serial No. 442,366. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. PRICE, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, 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.

My invention relates to that type of pencil sharpeners patented to me July 19, 1892, No. 479,303; and it consists in a novel construction and arrangement of parts as will be hereinafter described and claimed, whereby the lead of the pencil is sharpened on the inner periphery of an emery or other suitable roughened surfaced wheel on the same principle as in my aforesaid patent, the wood of the pencil may be cut away to a cone form prior to the pencil being adjusted to a position for having the lead point sharpened, and the pencil after it is withdrawn from the cone which carries the cutters for cutting away the wood, then introduced into a suitable support in relation to the emery grinding wheel, and its lead end ground off or sharpened by the emery wheel; the pencil in this operation answering as a handle whereby to effect the grinding off of the lead.

In the accompanying drawings, Figure 1 is a side elevation, illustrating one form of my improved pencil sharpener. Fig. 2 is a partly sectional and elevation view, illustrating another form of the sharpener, and Fig. 3 also a side elevation illustrating still another form of the sharpener.

A in the drawings represents a hollow cylindrical wheel or drum closed at one end and open at the other, and faced on the inner surface of its rim with emery or other suitable grinding material; B a shaft fastened, by means of one of its ends, centrally in the plate which closes one end of the wheel or drum.

C is a supporting bracket-frame forming bearings for the shaft B. The bearings (one or both) of the shaft are slotted so as to allow the shaft and wheel to move up and down a slight distance in the direction of the force of a spring D which holds the wheel in working contact with the pencil during the sharpening operation. In Fig. 1 a conical sharpener E of ordinary construction is soldered or otherwise suitably secured to the closed end of the wheel or drum A, and a conical holder E′ is fastened to the supporting bracket C, the two conical devices E and E′ being at nearly a right angle to one another. The spring D is fastened by one end to the bottom of the bracket and by its other end applied upon the shaft B, as shown, and the shaft or its bearings are fitted in a slot or slots *a*, and is free to rise and descend under the force of the spring. With this construction the pencil has its wood pared off to a conical form by inserting it in the conical sharpener E, the blades *b* doing this work in the ordinary way as the pencil, is revolved against them. After this is done, the pencil is withdrawn and inserted into the conical holder E′ and is made to go around with the lead in contact with the inner surface of the emery coated rim of the wheel A′, till it is properly pointed or sharpened. In Fig. 2 the construction is the same as in Fig. 1, except that the hollow conical holder E′ is not employed, and, in lieu thereof, the bracket frame C is bored out at the ends as at *c*, *d*, to fit the conical end of the pencil after it has been pared off by the sharpener E, and to hold it while it is having its lead sharpened. In Fig. 3, a construction similar to Fig. 1 is shown, except that the conical sharpener E is shown attached to the bracket frame instead of to the wheel A. The spring D holds the wheel down against the point of the pencil while it is being ground.

In all of the constructions, the pencil has to be removed from the cone sharpener after the wood has been pared off, and then inserted into the conical holder, and thereby held in proper position while the lead is ground to the proper shape.

What I claim as my invention is—

1. The rotary hollow grinder, the inner surface of its rim serving for grinding off the lead points of pencils, in combination with a conical sharpener for cutting away the wood of pencils, and with a frame having a conical holder which revolves in the shaft of the grinder, whereby the wood of the pencil can be first cut to the proper shape, and then the lead can be ground to the desired shape, substantially as described.

2. The rotary hollow grinder, the inner surface of its rim serving for grinding off the lead of pencils, in combination with the conical sharpener for cutting off the wood of pencils, a conical pencil holder and the pencil inserted into the holder, and a bracket frame to which both the sharpener E and the conical holder are applied; whereby the pencil can be used as a crank arm and made to move around inside the hollow emery wheel, substantially as described.

3. The combination of the rotary hollow rotary grinder having a shaft, the bracket frame forming bearings for the shaft which allow the shaft to rise and descend, the spring, the conical sharpener for cutting away the wood, and the device for supporting the pencil during the pointing of its lead; whereby the emery grinder and its shaft can adjust themselves to the size of the lead of the pencils, substantially as described.

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

WILLIAM G. PRICE.

Witnesses:
PERCY PITT,
A. F. ABBOTT.