(No Model.)

A. AMES.

LEAD PENCIL SHARPENER.

No. 422,485. Patented Mar. 4, 1890.

Fig. 1.

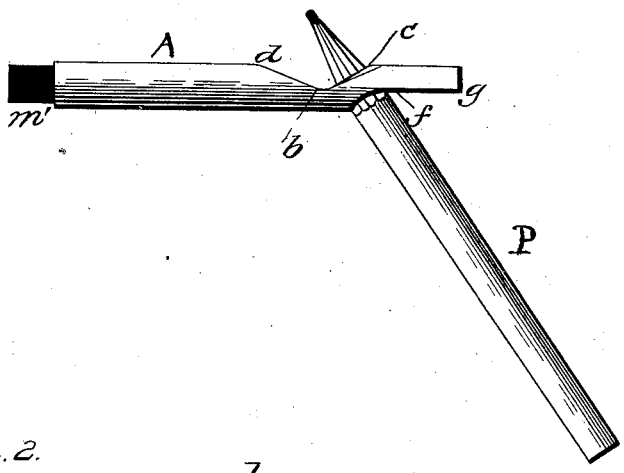


Fig. 2.

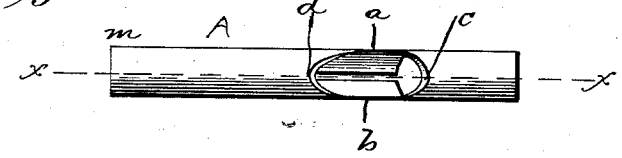
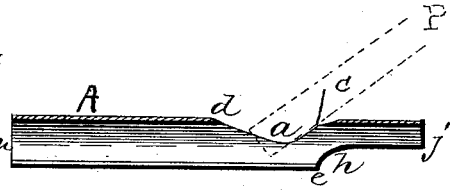


Fig. 3.

Fig. 4.



WITNESSES

F. L. Durand

Saml. H. Lewis.

Adelbert Ames

INVENTOR by

Jno. Aubrey Lewis

Attorney

UNITED STATES PATENT OFFICE.

ADELBERT AMES, OF HIGHLANDS, NEW JERSEY.

LEAD-PENCIL SHARPENER.

SPECIFICATION forming part of Letters Patent No. 422,485, dated March 4, 1890.

Application filed September 25, 1889. Serial No. 325,046. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT AMES, a citizen of the United States, residing at Highlands, in the county of Monmouth and State of New Jersey, have invented a certain new and useful Lead and Slate Pencil Sharpener; 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.

The object of the invention is to produce a tubular pencil-sharpener which may be carried on the pencil, if desired, and when so carried the cutting-edge will be protected.

Figure 1 is a side elevation of the improved sharpener, showing pencil in position for sharpening. Fig. 2 is a view looking into the side opening. Fig. 3 is a reverse view from Fig. 2. Fig. 4 is a section on line $x\,x$, Fig. 2.

The sharpener is made from a steel tube A, which is preferably open at one side A′, so that the tube may spring and fit pencils which differ slightly in diameter. The split side of the case is cut away at $e\,f\,g\,h\,i\,j$, something after the manner of a quill pen or tooth-pick, about one-half the diameter of the tube being thus cut or scarfed away. The tube is not pointed. An elliptical piece is removed from the front or closed side of the tube, forming an opening $a\,b\,c\,d$, this opening extending toward the end of the tube, so that the end c of the opening is nearly opposite the scarfed shoulder e at the opposite side of the tube. (See Figs. 2 and 3.) The end c of the opening is beveled, so as to present a cutting-edge on the plane of the inner surface of the tube. This cutting-edge can be sharpened by grinding or filing. The inner surface k of the tube at the scarfed portion is roughened somewhat like a file.

The sharpener is used by passing a pencil B through the opening $a\,b\,c\,d$ from the concave side of the tube, as shown in Fig. 1. The edge c forms a double arc, and when moved along the pencil will produce a conical point.

A new pencil with a square end can be partly beveled by placing the pencil in the position shown by dotted lines, Fig. 4, and the sharpening completed as in Fig. 1.

The edge e of the sharpener may be made a cutting-edge, if desirable.

The end m of the tube may receive a rubber eraser m', if desired.

This sharpener can be carried on the pencil, and as the cutting-edge is in the plane of the inner surface of the tube the edge will not cut the pencil unless the body of the latter be placed at an angle relatively to the body of the tube.

What I claim is—

1. A pencil-sharpener consisting of a thin tube having an opening in one side large enough to pass the pencil-point, the metal at one side of this opening being sharpened to present an edge in the plane of the surface of the tube, substantially as described.

2. A pencil-sharpener consisting of a metallic tube with an opening in one side large enough to pass the end of the pencil, having a cutting-edge in the plane of the inner surface of the tube, and having the side of the tube opposite this opening scarfed away, substantially as described.

3. A pencil-sharpener consisting of a split tube having an opening at one side large enough to pass the point of the pencil, and having a cutting-edge in the plane of the inner surface of the tube, the split side being scarfed or cut away, as described, opposite the opening aforesaid, and the inner surface of the tube next the scarf roughened, all substantially as described.

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

ADELBERT AMES.

Witnesses:

J. L. VANSANT,

H. BICKERTON.