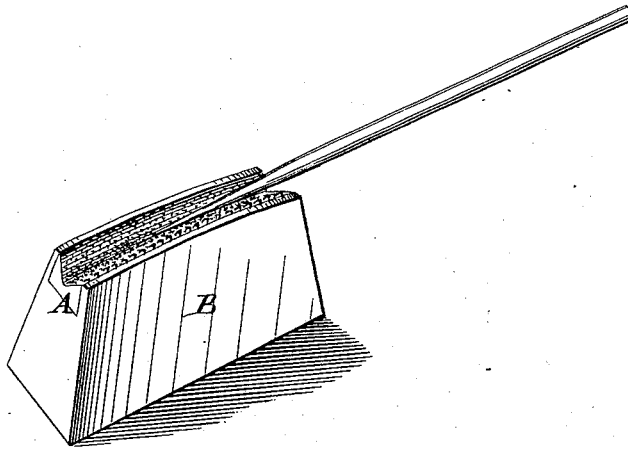


W. H. S. HENNAMAN.  
SLATE PENCIL SHARPENERS.

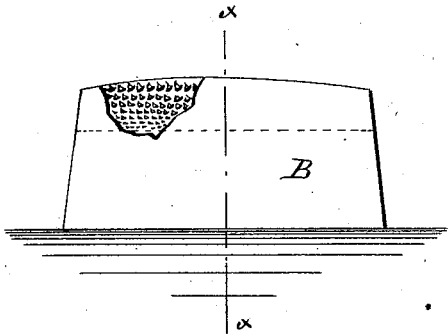
No. 185,030.

Patented Dec. 5, 1876.

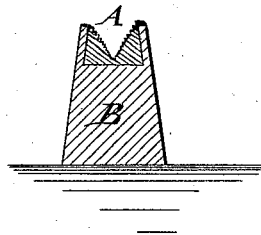
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

*Chas. Nide*  
*John Coethals.*

INVENTOR:

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# UNITED STATES PATENT OFFICE.

WILLIAM H. S. HENNAMAN, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN SLATE-PENCIL SHARPENERS.

Specification forming part of Letters Patent No. **185,030**, dated December 5, 1876; application filed September 2, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM H. S. HENNAMAN, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Slate-Pencil Sharpener, of which the following is a specification:

Figure 1 is a perspective view. Fig. 2 is a side elevation. Fig. 3 is a section on line  $x x$  in Fig. 2.

My invention consists in a V-shaped file or rasp, made convex in the direction of its length, and provided with graduated cuts or teeth, being coarser at the upper and outer edge of the V, where the greater portion of the cutting is done, and finer in the angle of the V, where the point of the pencil is formed. The said file or rasp is conveniently mounted in a block of wood or other material.

The object of my invention is to furnish an inexpensive and efficient slate-pencil sharpener.

Referring to the drawings, A is a piece of steel forming the file, which is grooved longitudinally, the groove being V-shaped in cross-section, as shown clearly in Fig. 3, and provided with file cuts or teeth, which are coarse at the upper and outer edges of the groove, and gradually diminish in size toward the an-

gle of V. The object in cutting the teeth in this manner is to rapidly cut the larger portion of the pencil, while the point is cut by the smaller teeth without danger of breaking.

The file thus formed is made convex in the direction of its length, to compensate for the rocking motion of the hand when moving the pencil in the V-shaped groove.

B is a block of wood or other suitable material, in which the file is mounted for convenience in handling.

The file may be provided with a convenient handle in place of the block B, or the steel constituting the file may be made of such size as to require no handle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A pencil-sharpener having an angular concavity, provided with teeth gradually diminishing in size from the upper edges to the vertex of angle, substantially as and for the purpose specified.

WILLIAM H. S. HENNAMAN.

Witnesses:

C. SEDGWICK,  
GEO. M. HOPKINS.