

(No Model.)

H. BROOMELL.
PENCIL SHARPENER.

No. 466,734.

Patented Jan. 5, 1892.

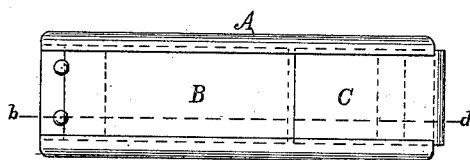


Fig. 1.

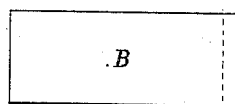


Fig. 5.



Fig. 6.

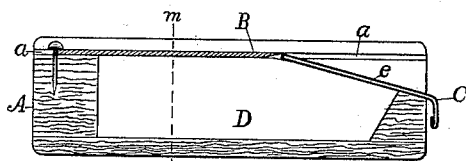


Fig. 2.

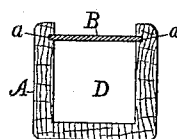


Fig. 4.

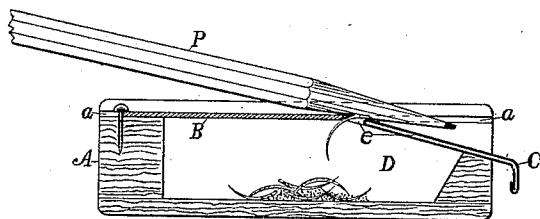


Fig. 3.

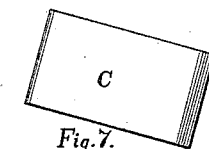


Fig. 7.

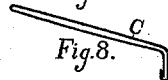


Fig. 8.

Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY BROOMELL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
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PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 466,734, dated January 5, 1892.

Application filed February 28, 1891; Serial No. 383,163. (No model.)

To all whom it may concern:

Be it known that I, HENRY BROOMELL, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a specification, reference being had therein to the accompanying drawings.

The objects of my invention are, first, to produce a pencil-sharpener having a cavity or receptacle for receiving and retaining the cuttings and facilities for discharging the same at pleasure; second, to provide an adjustment for regulating the thickness of chip or shaving, and, third, to so construct the instrument that the knife may be readily removed for the purpose of sharpening it. I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure 1 is a plan or top view of the instrument, and Fig. 2 a longitudinal section on the line *b d*, Fig. 1. In these two views the instrument is shown closed. Fig. 3 is also a longitudinal section, in which it is shown slightly opened, and the method of using it is illustrated. Fig. 4 is a cross-section on the line *m n*, Fig. 2. Figs. 5 and 6 are views of the knife, and Figs. 7 and 8 views of the slide removed from the case.

Similar letters refer to similar parts throughout the several views.

A is the case. It is made of wood or any other suitable material. On the inner surfaces of the sides of the case are formed small grooves *a a*, into which is inserted the knife B, with the cutting edge or end toward the slide. Two other grooves, one of which *e* is seen in Figs. 2 and 3, are made at an angle to the knife-grooves, and into these is inserted the slide *c*. The slide is made of thin sheet metal bent upon itself with a slight opening between the parts, as more clearly seen in Fig. 8. This construction imparts to it an elasticity which produces sufficient friction in the grooves to hold it in place, wherever it may be adjusted. This slide serves for the several purposes of an adjustment for thickness of cut, an adjustment for size of throat, (or

space between knife and slide,) as a closing-piece for retaining the cuttings, and an opening-piece for discharging the contents. The knife B, which should be made of good steel well tempered, is so adjusted that the cutting-edge is even with or a little above the slide, where they meet, and a suitable stop is provided at the back end to keep it in place. As the knife wears it may be set up by moving the stop or inserting a liner back of the knife, or an adjustable stop may be used. The case in its construction is made closed at its sides, bottom, and ends, and when the knife and slide are inserted into their respective places, the two meeting, it is also closed at the top. The combination of these several parts forms the closed receptacle D.

The operation is as follows: The slide is drawn out sufficiently to make an opening between its inner end and the knife. The pencil to be sharpened is then drawn repeatedly over the edge of the knife, being rotated in the hand as the operation proceeds. The action is similar to that of a small plane, and is clearly illustrated in Fig. 3. The cuttings fall into the receptacle below, and by closing the slide they may be retained till the box is full, when it can be emptied by withdrawing the slide. The thickness of the cut depends not upon the actual amount of opening, but upon the distance of the edge of the slide below the level of the knife, and it is in order that this distance may be varied at pleasure that the slide is placed at an angle with the knife. For a blunt pencil a thick cut can be made, while for a fine point a very light one will be produced by pressing the slide in and partially closing the opening as the operation nears a finish. To remove the knife for sharpening it is only necessary to draw the slide sufficiently to be out of the way and pass the knife out over it.

This instrument is adapted to sharpening both lead and slate pencils. Any desired taper can be produced, and its feature of retaining the cuttings will be appreciated by those who have noticed the amount of dirt occasioned by sharpening pencils in the ordinary way.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the grooved case or box A and knife B adapted thereto, the double
5 slide C, consisting of two layers of sheet metal or other substance adapted to grooves in the case and used for the purpose of adjusting the instrument for different thicknesses of

cuttings and as an opening and closing piece, substantially as described. 10

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

HENRY BROOMELL.

Witnesses:

HARRY C. EISENBISE,
WILLIAM BENNER.