(No Model.)

A. P. ODELL & N. E. SMITH.

PENCIL SHARPENER.

No. 491,129. Patented Feb. 7, 1893.

Fig. 1.

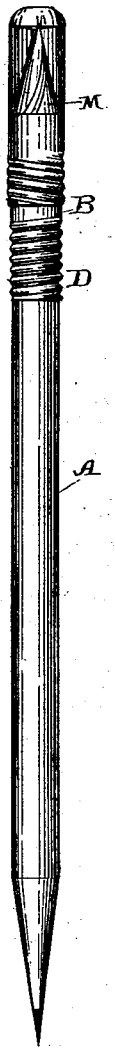


Fig. 2.

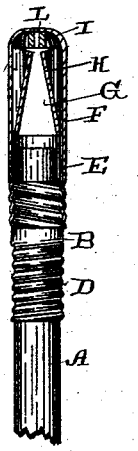


Fig. 3.

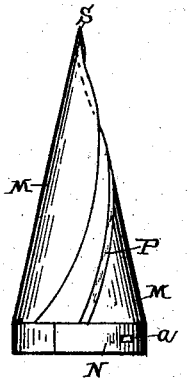


Fig. 4.

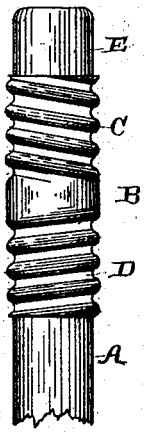


Fig. 5.

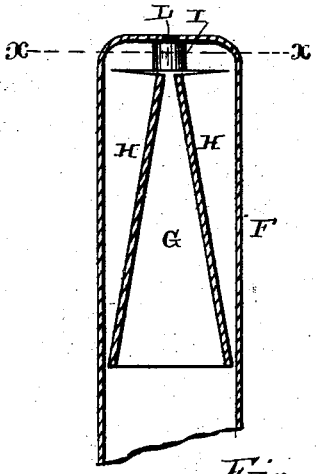


Fig. 6.

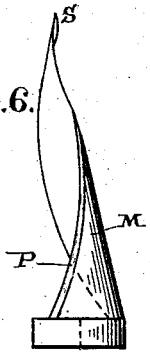
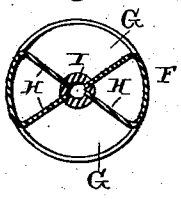


Fig. 7.



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UNITED STATES PATENT OFFICE.

ALBERT P. ODELL AND NED E. SMITH, OF BRADFORD, PENNSYLVANIA.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 491,129, dated February 7, 1893.

Application filed April 23, 1892. Serial No. 430,434. (No model.)

To all whom it may concern:

Be it known that we, ALBERT P. ODELL and NED E. SMITH, of Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Pencil-Sharpeners; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to improvements in pencil sharpeners; and it consists in certain novel features of construction which will be fully described hereinafter and particularly pointed out in the claims.

The object of our invention is to provide a cutter which is provided with one or more spiral cutting edges, whereby the breaking of the points of the leads is prevented, and to secure these cutting edges of knives in a cap to fit over the end of a lead pencil.

In the accompanying drawings:—Figure 1 is a side elevation of a pencil showing our invention applied thereto. Fig. 2 is a vertical section of the cap in which our invention is placed, the same being shown attached to the upper end of a pencil. Fig. 3 is an enlarged detached view of the knives. Fig. 4 is a side view of the upper end of a pencil, to which our invention is applied. Fig. 5 is an enlarged detached vertical section of the cap in which the knives are placed. Fig. 6 is a detached view of one of the knives alone. Fig. 7 is a horizontal section taken on the line x—x of Fig. 5.

A indicates an ordinary lead pencil, to the upper end of which is attached a metal tube B. This metal tube B is provided with a right handed screw thread D at its lower end, and with a left handed screw thread C at its upper end. The lower end of this tube is screwed upon the upper end of the pencil, and an erasing rubber E is placed in the upper projecting end of the said tube.

Our invention consists of a cap F that is provided at its lower end with a screw threaded portion that fits over the upper screw threaded portion of the tube B as illustrated. At opposite sides of this cap it is split, and the sides bent inward as shown in Fig. 7 to the center, thus forming openings G through which the shavings made by the knives will fall. We do not limit ourselves to two openings, for one, or more than two may be used if desired. Secured in the upper end of this cap is a short tube or ring I, and the top of the cap is provided with an opening which registers with the opening in the ring, and through this tube or ring the point of the pencil will extend as the wood is cut away.

The knives consist of two pieces M which have their edges cut in spiral form as shown, and one edge of each piece M is sharpened to form a knife edge P. The lower ends of these knives are secured together by means of a ring N, and this ring N is secured in position in the cap F by indenting the said cap from the outside and forcing the metal thereof into slots a formed in the ring N or in the knives, thus preventing the knives from having any turning movement, and securing them in position. As shown in Fig. 3 the adjacent edges of the knives are separated to form an opening between them, and the upper pointed ends S of the knives or blades M extend into the ring or short tube I at the upper end of the cap B and are thus held in their proper position, and prevented from separating when the pencil is forced between the knives to be sharpened.

By means of the above described construction we produce a simple pencil sharpener which will sharpen pencils very quickly and without breaking the points of the leads, which is a common defect of all pencil sharpeners.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:—

1. A pencil sharpener comprising a vertically slotted tube, two spiral knives projecting upward in said tube and so arranged in relation to each other as to form spaces between their adjacent cutting edges and a band for securing together the knife sections at their lower ends, substantially as shown and described.

2. A pencil sharpener comprising a cap having openings for the passage of shavings, and two knives with spiral cutting edges, the said

knives tapered to a point, and constructed with a space between the adjacent edges thereof, substantially as described.

3. A pencil sharpener comprising a cap having openings for shavings, two knives secured at their lower ends to the inner side of the said cap, a ring at the top of the cap, the knives formed into a point at their upper ends which extend into the said ring, and an opening in the top of the cap opposite the ring, substantially as set forth.

4. A pencil sharpener comprising two knives secured at their lower ends, having spiral cutting edges, the knives formed to a point at their upper ends and to form spaces between the adjacent edges thereof, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

ALBERT P. ODELL.
NED E. SMITH.

Witnesses:
ED. F. MCINTIRE,
G. B. MCCALMONT.