H. G. DOWNS.

Pencil-Sharpeners.

No. 207,402. Patented Aug. 27. 1878.

Fig. 1.

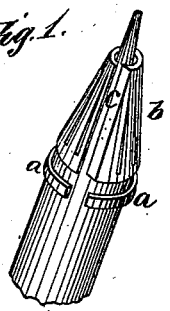


Fig. 4.

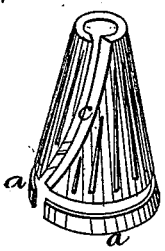


Fig. 2.

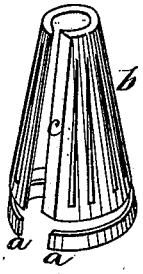


Fig. 3.

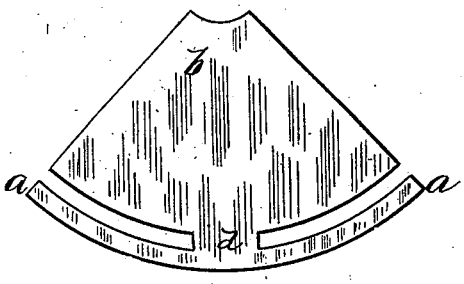
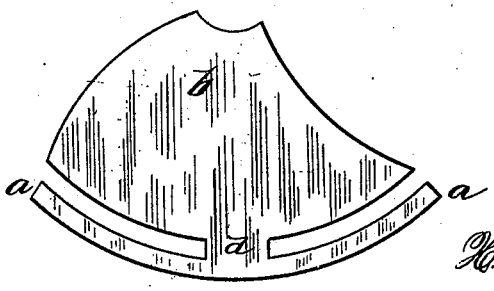


Fig. 5.



Witnesses:
Chas. H. Searle.
W. B. Snelling.

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Inventor:
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UNITED STATES PATENT OFFICE.

HERMAN G. DOWNS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES W. RHODES, OF SAME PLACE.

IMPROVEMENT IN PENCIL-SHARPENERS.

Specification forming part of Letters Patent No. **207,402**, dated August 27, 1878; application filed July 25, 1878.

To all whom it may concern:

Be it known that I, HERMAN G. DOWNS, of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Pencil-Sharpeners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a perspective view, enlarged, of a pencil having my improved sharpener applied thereto, and Fig. 2 is a similar view of the sharpener detached. Fig. 3 is a plan of the blank from which sharpener shown in Figs. 1 and 2 is made. Fig. 4 is a perspective view of a sharpener constructed in accordance with my invention, and having the cutting-edge made in spiral form. Fig. 5 is a plan of a blank cut so as to form the device shown in Fig. 4.

Like letters in all the figures indicate corresponding parts.

The object of my invention is to produce a simple, efficient, and comparatively inexpensive pencil-sharpener, which may, if desired, be allowed to remain upon the pencil while the latter is being used; and to accomplish this the invention consists in certain peculiarities of construction and arrangements of parts, as will be hereinafter first fully described, and then pointed out in the claims.

The body of the sharpener is conical in shape, as shown in Figs. 1, 2, and 4, to conform to the desired point on the pencil. Above this body are two spring-arms, *a a*, the elasticity of which serves to hold the sharpener upon the pencil. These springs clasp the pencil above the conical or cut-away portion at the point, and they are thus enabled to hold the sharpener with a uniform grasp.

The device is preferably formed by employment of a blank piece of metal, cut out as in Figs. 3 and 5, wherein it will be observed that the arms *a a* are separated from the body *b* by a little distance. While in the flat position an edge of the blank may be ground down most conveniently to form the desired cutting-edge. The blank is also cut or grooved by a series of channels for the purpose of forming a roughened surface upon the exterior of the sharpener when completed, thus rendering it easy to turn the same upon the pencil in performing the sharpening operation. The blank is then bent up into the proper shape to form the completed article. By this mode of manufacture the cost of the device is made very little; but for all essential purposes of the invention the device may be cast or otherwise formed.

The springs *a a* operate independently of the conical or cutting portion of the sharpener—that is, they will continue to bear upon the uncut portion of the pencil, although the cutting-edge may be sprung out or in, as will occur when the pencil is being sharpened. In this the improved device is essentially different from that class of sharpeners wherein the cutting-edge is a mere continuation of one edge of the holding-spring, or wherein the cutter is formed upon a continuation of the holding-spring.

The invention is also to be distinguished from that class of sharpeners wherein a screw forces or draws the cutter against the point of the pencil. In this latter form great nicety of adjustment is required, in order to make the upward movement of the sharpener correspond with the amount of material cut away; and it is found that when the cutter is removed the pencil is disfigured by a spiral groove made by the advancing screw.

As in Figs. 4 and 5, it is intended to cut the knife-edge obliquely, or so that it will wind about the point of the pencil in a partial spiral. Some advantage in the cutting capacity of the device may be derived from adoption of this form, though for all practical purposes the form shown in Figs. 1 and 2, it is believed, will be found sufficient. After bending up of the blank it should be properly tempered.

d is a narrow neck, which joins the spring-arms *a a* with the main portion of the body, and the plain portion at *c* indicates the cutting-edge.

When constructed in accordance with the foregoing description the device may be left on the pencil, where it will operate as a protector to the point, which in use will project through the upper open end of the body, or it may be

used as are all ordinary sharpeners; and it is found to admirably answer the several purposes of the invention.

As before intimated, I am aware of previously-existing sharpeners intended to remain upon the pencil, being held thereon by springs and screws. I am also aware of numerous forms wherein the knife-edge is made separate from the body. To these forms I desire it understood that I lay no claim; but,

Having now fully described my invention, what I do claim as new, and desire to secure by Letters Patent, is—

1. The herein-described blank for a pencil-sharpener, the same being formed substantially as shown—that is to say, with the upper and lower concentric curves joined by inclined sides, and having curved arms *a a* connected therewith by the narrow neck *d*, as and for the purposes set forth.

2. The herein-described pencil-sharpener, consisting of the conical body *b*, open at both ends, and provided with a cutting-edge, *c*, and curved spring-arms *a a*, united with the body by a narrow neck, *d*, which arms confine the sharpener upon the pencil, as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

HERMAN G. DOWNS.

Witnesses:

WM. H. DOWNS,

CHAS. K. SEARLE.