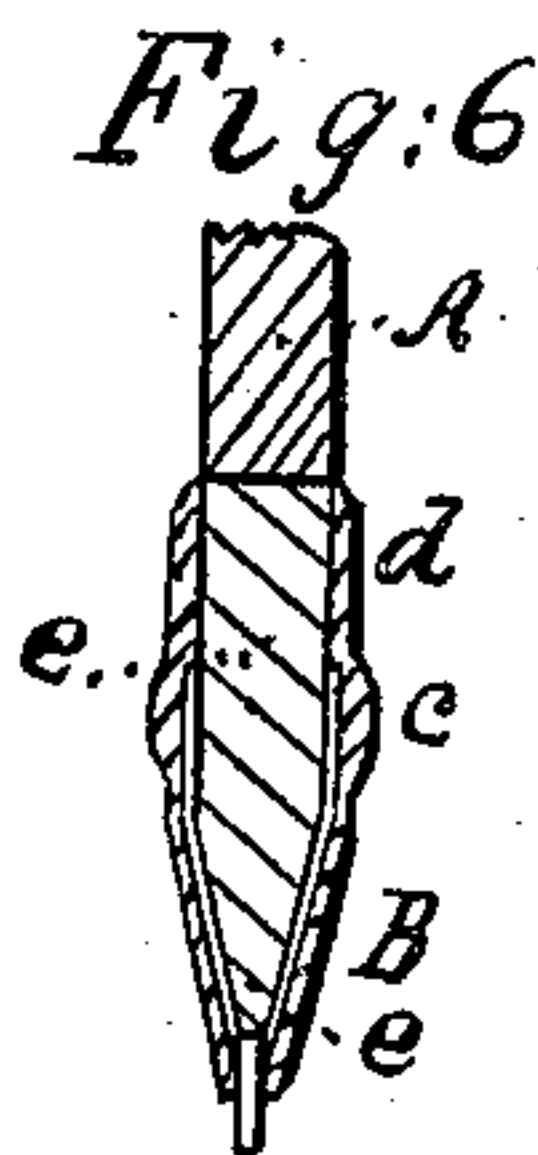
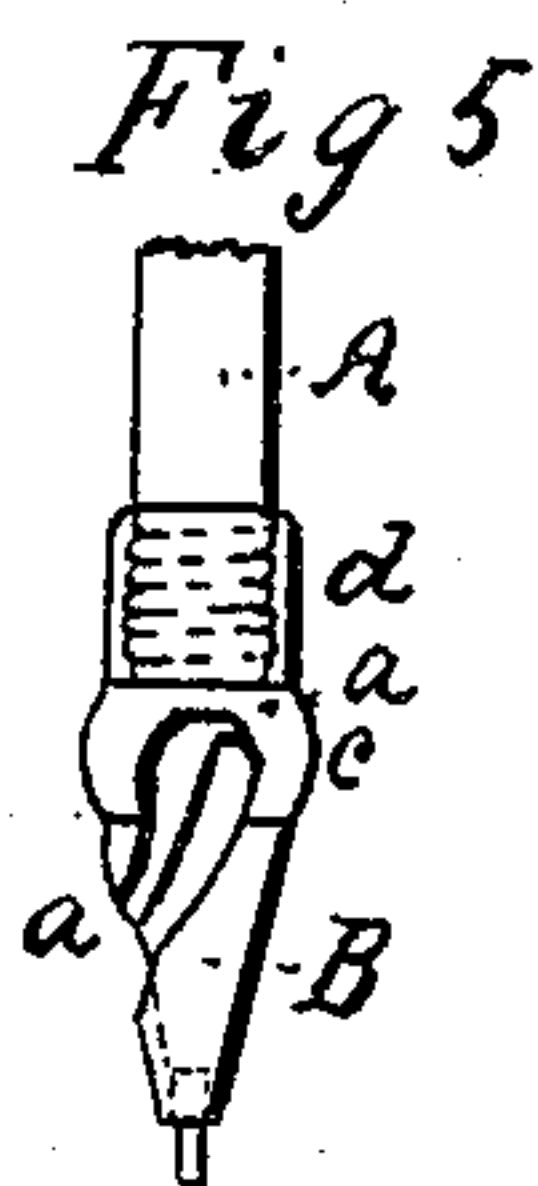
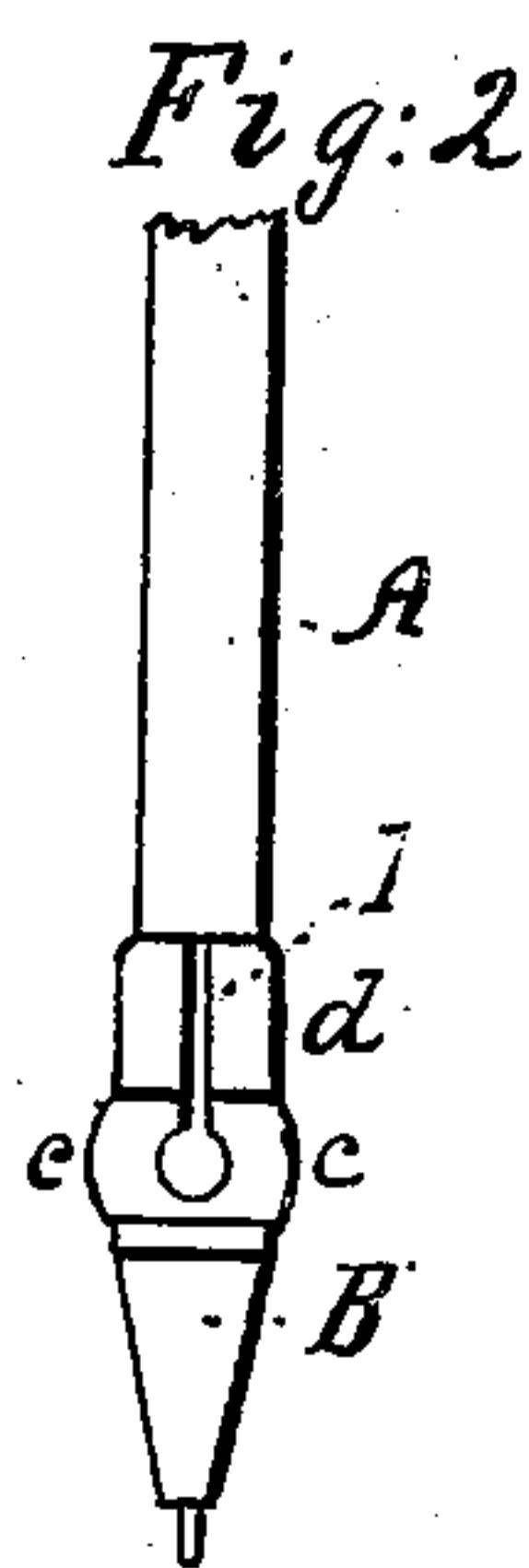
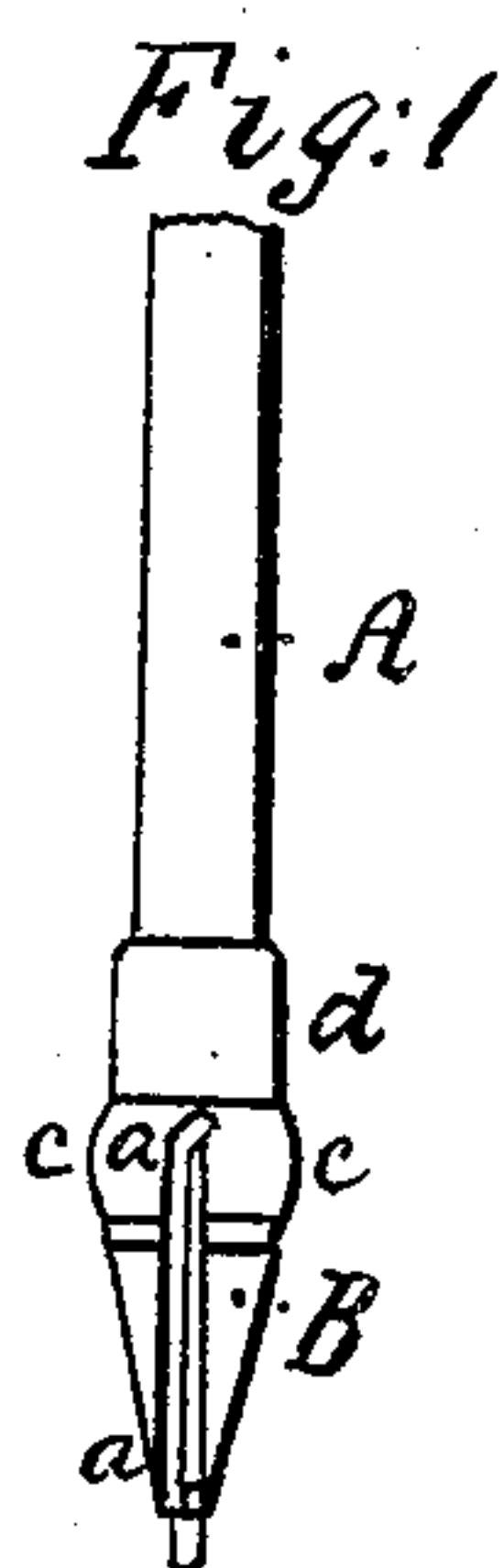


C. C. Plaisted.
Pencil Sharpener.
N^o 87,967. Patented Mar 16, 1869.



Witnesses

Theo. G. Ellis.

Charles E. Fellows.

Inventor

Charles C. Plaisted



CHARLES C. PLAISTED, OF HARTFORD, CONNECTICUT.

Letters Patent No. 87,967, dated March 16, 1869.

IMPROVEMENT IN PENCIL-SHARPENERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHARLES C. PLAISTED, of Hartford, in the county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Pencil-Sharpener; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention consists in a pencil-sharpener which can remain attached to and form part of a pencil when in use.

It also consists in the peculiar construction of the sharpener, for the purpose of effecting the object desired in the best manner.

Figure 1 shows a view of a pencil with my improved sharpener, looking at the cutting-edge.

Figure 2 shows a view at right angles to that shown in fig. 1.

Figure 3 is a bottom view of the sharpener.

Figure 4 is a top view of the same.

Figure 5 shows another form of sharpener, with a spiral cutting-edge.

Figure 6 is a vertical section of the sharpener and pencil as shown in figs. 1 and 2.

A is an ordinary lead-pencil, and

B, the sharpener.

a a is the cutting-edge.

b is a slit, cut down on opposite sides of that part of the sharpener which embraces the pencil, in order that the spring of the two parts into which it is divided shall clasp the pencil firmly.

c is a raised part, which is milled around its circumference, to hold the cutter when sharpening the pencil.

The sharpener is intended to fit the wood of the pencil, through the part *d*, above the cutting-edge, below which it is freed out to a larger diameter than the pencil, as is shown in figs. 6, between *e* and *e*.

The cutting-edge *a a* is set in with a proper tool, after the inside is bored out, and the cutting-slot formed.

This places the edge at the proper angle for taking hold of the wood in cutting.

The cutting-edge *a a*, instead of being made straight, as in fig. 1, can be curved or spiral, as shown in fig. 5, if desired.

My improved sharpener can be turned from an ordinary piece of steel wire, first boring the hole for the pencil, and then enlarging the bore at the part described, by moving the cutting-tool out from the centre; then turning the outside, milling the part *c*, and, when finished, cutting it off from the end of the wire.

The slit *b* and the slot for the cutting-edge are then made.

The cutting-edge is set inward by a blow or pressure, and the edge sharpened.

The operation of my invention, when in use, is as follows:

The pencil is inserted in the sharpener, pressed in, and turned gradually around. The cutting-edge shaves off the wood, and leaves the lead protruding from the bottom, ready for use.

When worn down, a few turns of the sharpener again expose it, by shaving away the wood.

My improved sharpener can be detached from the pencil at any time, and attached to another.

Claim.

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

Constructing a pencil-sharpener of one solid piece of metal, by turning and boring, in such a manner that the part *d* fits and clasps the pencil, in the manner described, and the part between *e* and *e* has its bore enlarged, to give a better hold to the cutting-edge, when set in at the proper angle, substantially as herein specified.

CHARLES C. PLAISTED.

Witnesses:

THEO. G. ELLIS,

CHARLES E. FELLOWS.