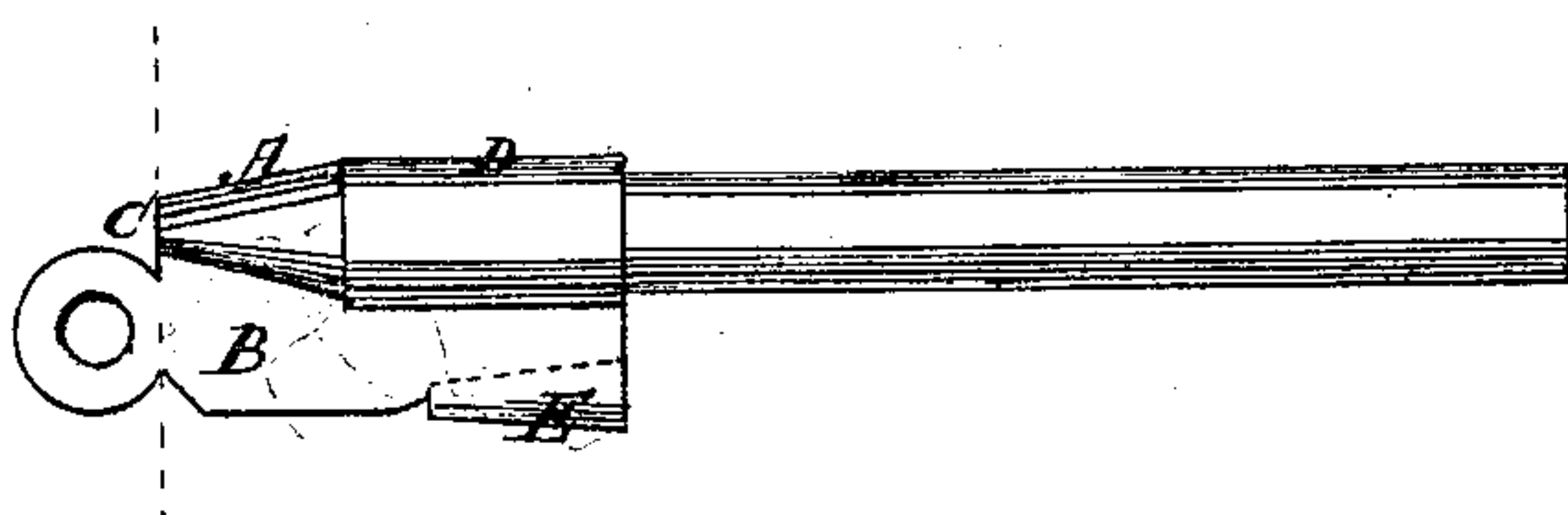


A. E. SCHATZ.  
Pencil Sharpeners.

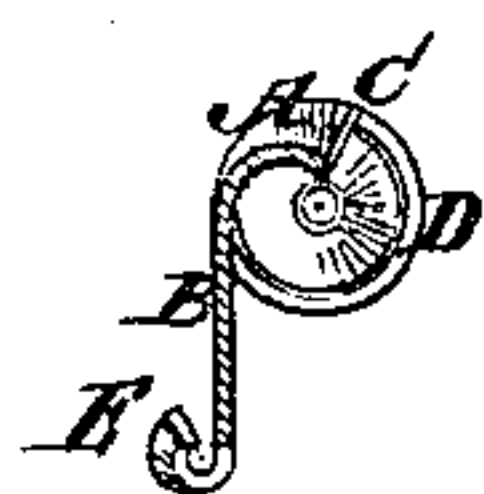
No. 138,943.

Patented May 13, 1873.

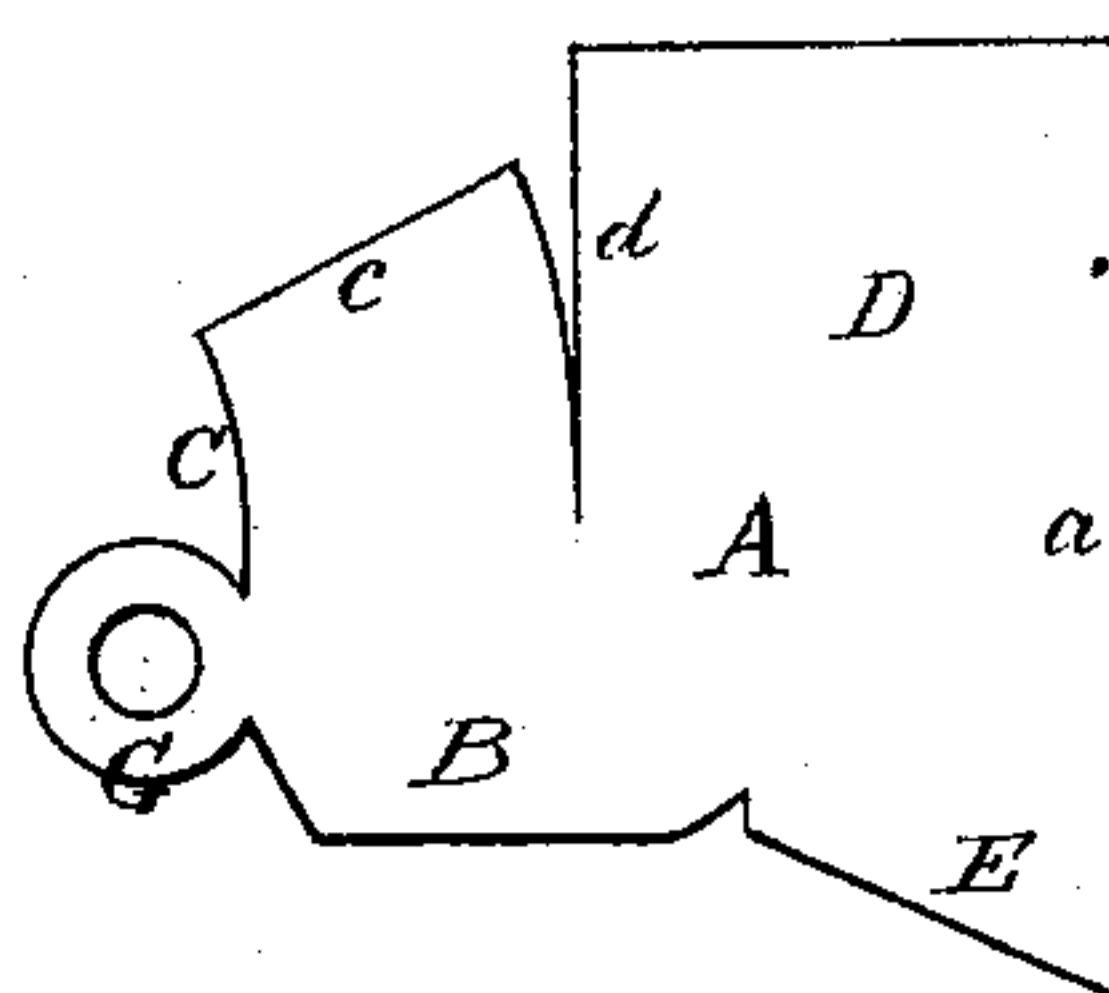
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

E. Wolff  
Francis McArdle

Inventor:

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# UNITED STATES PATENT OFFICE.

ADAM E. SCHATZ, OF NEW YORK, N. Y.

## IMPROVEMENT IN PENCIL-SHARPENERS.

Specification forming part of Letters Patent No. **138,943**, dated May 13, 1873; application filed October 21, 1871.

*To all whom it may concern:*

Be it known that I, ADAM E. SCHATZ, of New York, in the county and State of New York, have invented a new and useful Improved Pencil-Sharpener; and I do hereby declare that the following is a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, in which—

Figure 1 is a side view of my improved pencil-sharpener, with a pencil inserted in the tube. Fig. 2 is an end view of the sharpener. Fig. 3 represents the piece of metal from which the sharpener is made.

My invention relates to certain improvements in the manufacture of pencil-sharpeners; and it consists in the sharpener for the wood, the tubular guide for the pencil, and the sharpener or pointer for the lead, all made from a single piece of sheet metal, forming the entire article in one piece, without welding, soldering, or fusing any portion of the metal.

In the drawing, A represents a piece of sheet metal cut or struck out by stamping or otherwise. Its contour is bounded by seven straight lines, B E a D d c C, and a curved line, forming a nearly circular lug, G, as shown in Fig. 3, which lug is perforated to allow of attachment to the watch-chain or suspension when not in use. The straight line B extends from the lug G outward in a direction parallel with the longitudinal axis of the plate A to a point about midway of the length of said plate, at which point it joins the line E, which extends obliquely outward for a distance about equal to the length of the line B, forming an obtuse angle with said line B and an acute angle with the line a, which runs in a direction perpendicular to the longitudinal axis of

the plate for a distance somewhat less than the length of the plate, and forms a right angle with the line D, which runs backward to a point about opposite the junction of the lines B E, where it forms a right angle with the line d, which joins the line c at a point about midway between the center and the line B. At the point of junction of the lines d c the line d is continued toward the center by cutting through the metal and dividing the sides C c and d D a into two leaves. The sides c and E are then sharpened so as to form cutting-edges, and the plate is ready to be formed into a pencil-sharpener, which is accomplished in the following manner: The leaf d D a is rolled into a cylindrical form to serve as the tubular guide for the pencil, as shown at D, Figs. 1 and 2. The leaf C c, with its cutting-edge c, is rolled into a conical form, to serve as the sharpener for the wood, as shown at A', Figs. 1 and 2; and the acute-angled portion E, with its cutting-edge, is rolled into a smaller conical form, to serve as the sharpener for the lead, as shown at E, Figs. 1 and 2.

Thus the sharpener for the wood, the tubular guide for the pencil, and the sharpener for the lead are combined in one piece of metal, without welding, soldering, or fusing any portion thereof.

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

As an article of manufacture, the pencil-sharpener, constructed of a metal blank, bent at one side to form the wood-guide D and sharpener A', and at the other side to form the lead-sharpener E, substantially as specified.

ADAM E. SCHATZ.

Witnesses:

T. B. MOSHER,  
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