(No Model.)

E. NORELL.

PENCIL SHARPENER.

No. 502,632. Patented Aug. 1, 1893.

Fig. 1.

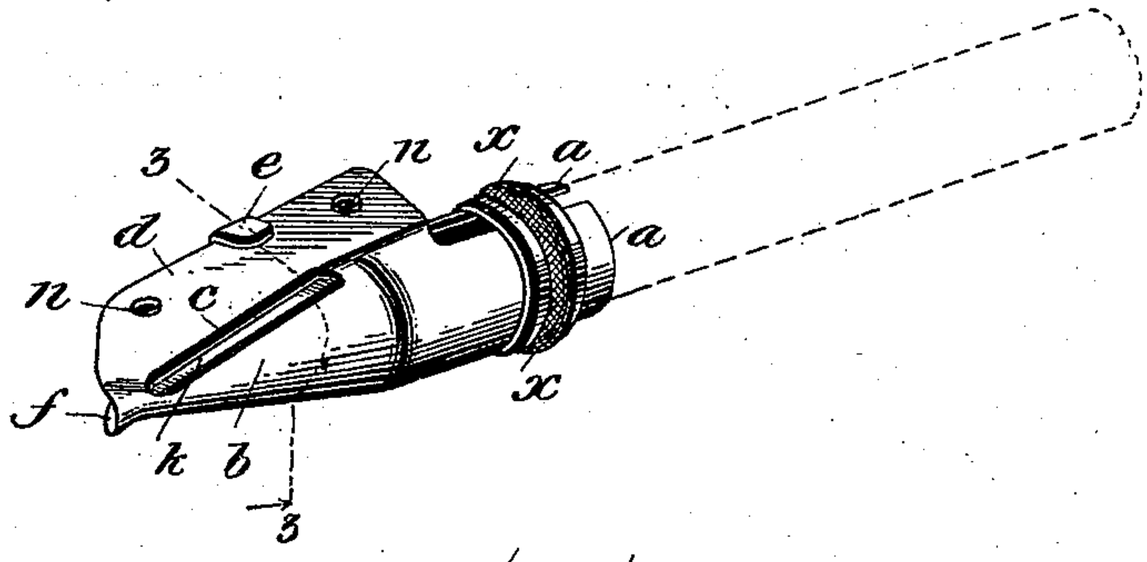


Fig. 2.

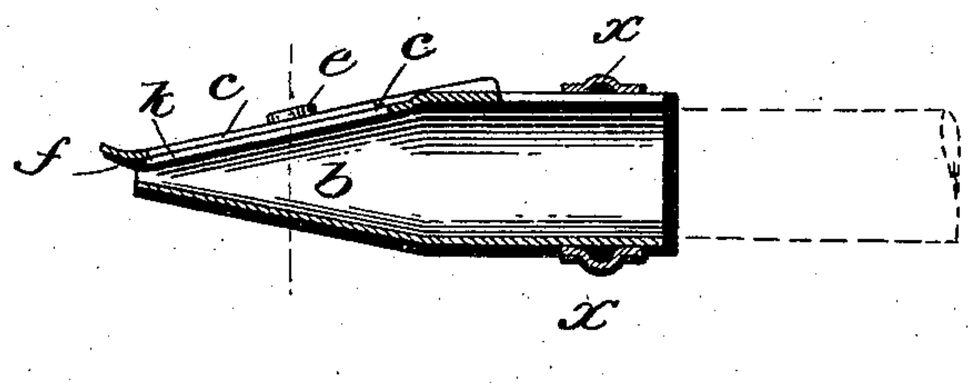


Fig. 3.

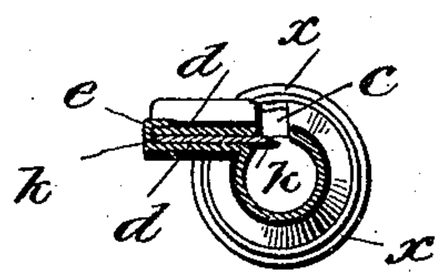
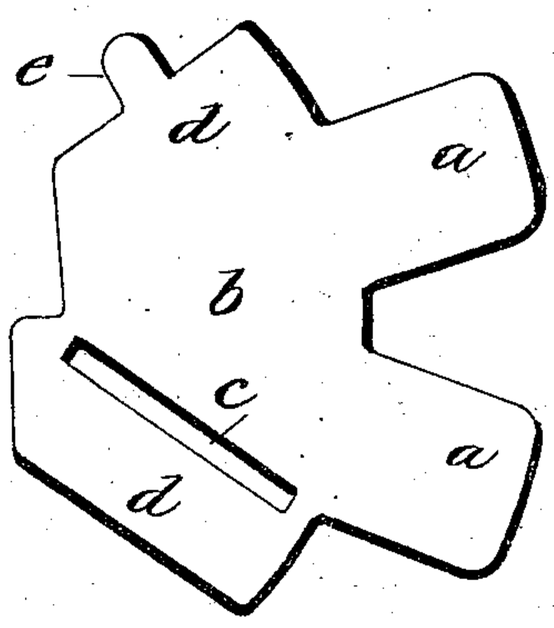


Fig. 4.



Witnesses:
L. C. Hills
Wellabick.

Inventor:
Ernst Norell by
Marcellus Bailey
his Attorney

UNITED STATES PATENT OFFICE.

ERNST NORELL, OF NEW YORK, N. Y., ASSIGNOR TO THE EAGLE PENCIL COMPANY, OF SAME PLACE.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 502,632, dated August 1, 1893.

Application filed April 27, 1893. Serial No. 472,009. (No model.)

To all whom it may concern:

Be it known that I, ERNST NORELL, a citizen of the United States, residing at New York, in the State of New York, have invented a new and useful Improvement in Pencil-Sharpeners, of which the following is a specification.

It is my object to produce a cheap and efficient pencil sharpener in the form of a lead pencil attachment—that is to say a sharpener which can be fitted and applied to the end of a pencil and sold with it just as a rubber tip now is. To this end I make the sharpener of sheet metal which forms not only the body of the sharpener proper, but also the holder by which the sharpener is held on the pencil. The whole device is formed in one from a sheet metal blank, which is first cut out in the proper shape from the sheet, and is then swaged or struck up into its ultimate form, furnishing the conical longitudinally slotted sharpener cap or tip with a bed along the slot for receiving and holding the knife, and a tubular neck by which it is fitted to and held on the pencil.

In the accompanying drawings—Figure 1 is a perspective view of the sharpener fitted, as a tip, on the end of a pencil. Fig. 2 is a longitudinal section of the same. Fig. 3 is a cross section on line 3—3 Fig. 1. Fig. 4 is a view of the blank from which the article is made.

The attachment has a tubular neck, which in this instance is composed of two spring jaws *a*, *a* inclosed by a sliding sheet metal clamping ring *x*, somewhat after the fashion of the pencil holding jaws and clamping ring of the well known "Pilot Tip" now on the market. These jaws are surmounted by the conical hollow body *b* of the sharpener proper having in one side a longitudinal slot *c* bordered on one edge by a knife bed, composed of the two lips *d*, between which is held the knife *k*, the edge of which is parallel with and projects a suitable distance into the slot to furnish the cutting edge for the point of the pencil. The knife is held to the lips by eyelets or rivets *n* which pass through the lips and holes in the intervening blade; or it may be there held by solder which also secures the lips together; or it may be held in place in any other convenient way. A flange *e* suitably located on the edge of one of the lips is bent over upon the other lip so as to still further hold the two together; this flange is not indispensable. At the extreme end of the conical tip is the nozzle *f*, into which the pointed end of the lead extends when the pencil is being sharpened.

Referring now to the blank shown in Fig. 4, the jaws are formed by the prongs *a*; *b* is the part from which the hollow body of the sharpener is formed; *c* is the slot; the portions marked *d* are the lips; and *e* is the flange on the edge of one of the lips. By suitable tools and formers, this blank is struck up or swaged into the form shown in Fig. 1 as will be understood without further explanation.

Having described my invention and the manner in which the same is to be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. A sheet metal sharpener attachment for lead pencils, formed in one piece, with a tubular neck to fit on the body of the pencil, a conical longitudinally slotted body surmounting the neck, and a knife bed bordering one edge of the slot, a knife blade being applied and secured to the bed, substantially as hereinbefore set forth.

2. A sheet metal sharpener attachment for lead pencils having a tubular clasping neck to fit on the body of the pencil, a conical longitudinally slotted body *b*, a knife bed composed of two lips *d* fastened together and bordering one edge of the slot, and a knife blade placed between the two lips and secured thereto, as set forth.

3. The pencil sharpener sheet metal blank, comprising essentially the prongs *a*, *a*, the body part *b*, the slot *c* and the lip portions *d*, *d*, as herein shown and described.

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

ERNST NORELL.

Witnesses:
SAMUEL KRAUS,
C. WM. BOMAN.