

C. A. GAISER.
PENCIL SHARPENER.
APPLICATION FILED APR. 14, 1910.

1,005,018.

Patented Oct. 3, 1911

Fig. 1.

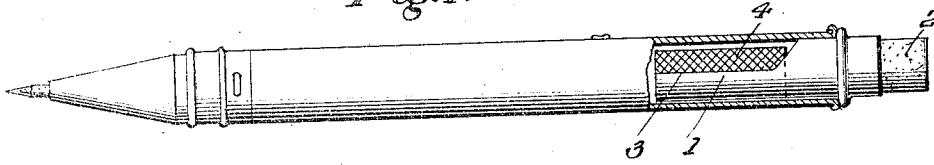


Fig. 2.

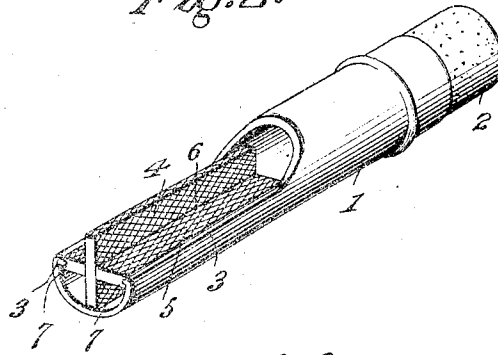


Fig. 3.

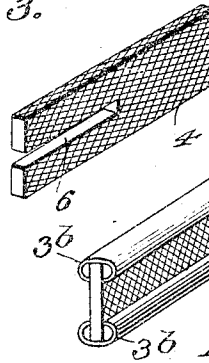


Fig. 6.

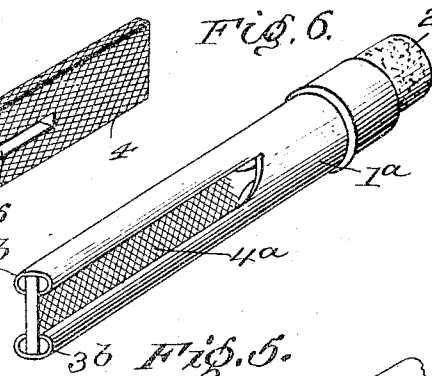


Fig. 4.

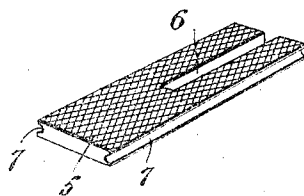
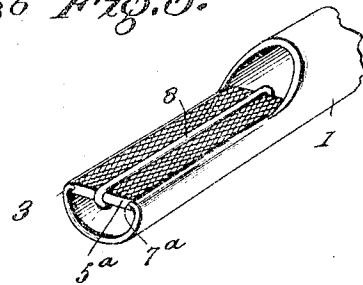


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES A. GAISER, OF TOLEDO, OHIO.

PENCIL-SHARPENER.

1,005,018.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed April 14, 1910. Serial No. 555,335.

To all whom it may concern:

Be it known that I, CHARLES A. GAISER, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Pencil-Sharpener, of which the following is a specification.

This invention comprehends certain new and useful improvements in sharpeners for the leads of clutch or automatic pencils, and relates particularly to a device designed for use in connection with a pencil case or automatic pencil embodied in my companion application for Letters Patent of the United States, executed of even date herewith.

The invention has for its primary object a simple, durable and efficient construction of sharpening device which may be readily secured to the barrel of an automatic pencil and occupy a minimum amount of space when not in use and which will present, when in use, a peculiarly novel arrangement of abrading surfaces, that will be herein-after fully described and claimed.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a side elevation of a pencil equipped with the sharpener of my invention; Fig. 2 is a perspective view of the sharpener detached; Figs. 3 and 4 are detail perspective views of file sections employed; Fig. 5 is a detail perspective view of a modification hereinafter specifically referred to; and, Fig. 6 is a perspective view of another modification.

Corresponding and like parts are referred to in the following description and accompanying drawings by the same reference characters.

My improved sharpening device comprises a preferably sheet metal cylindrical tube 1, designed to fit frictionally or otherwise in a socket of any desired formation or character formed for it in the rear end of a lead-holder or automatic pencil, a conventional form of which is illustrated in Fig. 1.

For the purpose of convenience, the tube 1 preferably carries a rubber eraser 2 which is held in one end of the tube in any desired way with a portion of the rubber projecting. The opposite end of the tube 1 is partially cut away as shown and the longi-

tudinal or side edges of the remaining part of this portion of the device are turned inwardly to form longitudinal flanges 3. The sharpening or abrading surfaces are, in the embodiment of the invention now being described, formed by two file sections designated 4 and 5 respectively, each of said sections being formed at one end with a longitudinal recess 6 whereby the two sections may be dovetailed together and produce a cruciform structure one section extending at right angles to the other as clearly illustrated in the drawing. The section 5 is formed in its side edges with longitudinal grooves 7 by which it may be detachably slipped into the tube 1 and be retained by the flanges 3 thereof, the file sections being exposed in the cut-away part of the tube 1.

From the foregoing description in connection with the accompanying drawing, it will be evident that I have produced a very simple, and durable sharpening device the parts of which may be easily assembled and disassembled, for instance whenever it is necessary to clean the file surfaces, and which may be conveniently manipulated to sharpen leads, it being of course understood that the sharpening device is intended for practically exposed leads and not for leads which are embedded in wood. As the leads that are intended to be used with my improved holder forming part of the subject matter of my companion application hereinbefore mentioned, are covered and protected by casings of paper or the like, the edges of the file sections 4 are also preferably serrated or roughened, and are designed primarily for use in removing a portion of the paper casing of the lead preparatory to rubbing the lead in the angle between the two sections for the purpose of sharpening the lead.

It is to be understood that my invention is not limited to the construction illustrated in Fig. 2, but that various modifications may be made without departing from the scope of the invention as defined in the appended claims. For instance, as illustrated in Fig. 4, I may employ a single file section designated 3^a, the same being provided with side grooves 7^a so as to engage the retaining flanges of the tube, and if it be desired to divide this single file into sections, I may wrap a wire 8 or the like around the file so as to serve as a guide in rubbing the lead over the file surface.

In the practical use of one of my sharpening devices, the tube 1 is held steady in one hand, and with the other hand the point of the lead is moved by means of the holder 5 back and forth on the file surface until the required shape is obtained.

To illustrate another modification, reference is to be had to Fig. 6. In this embodiment of the device a single file section 10 4^a may be used, the same being inserted in a tube 1^a which is provided with flange extensions 3^b in which the file section is inserted. The edges of these flanges, where they engage the file section, constitute 15 guides for the lead just as the wire 8 serves as a guide and the meeting angles 4 and 5 before described.

Having thus described the invention, what is claimed as new is:

20 1. The herein described lead sharpener, comprising a cylindrical tube partially cut away at one end, the side edges at the cut away portion being turned inwardly to form retaining flanges, and a file section of less 25 width than the diameter of the cylindrical

portion of the tube engaged with and retained by said flanges.

2. The herein described lead sharpener, comprising a cylindrical tube partially cut away at one end, the side edges of said cut 30 away portion being turned inwardly to form retaining flanges, a file section formed in its side edges with grooves engaging said flanges, and another file section arranged at right angles to the first-named file section, 35 each of said sections being of less width than the diameter of the cylindrical portion of the tube and being formed with an end recess by which the two sections are dove-tailed together, the parts being so arranged 40 that the flanges will hold one section in the cut away portion of the tube and such section will hold and retain the other file section.

In testimony whereof, I affix my signature 45 in presence of two witnesses.

CHARLES A. GAISER. [L. s.]

Witnesses:

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