(No Model.)

H. BAUMGARTEN.

PENCIL SHARPENER AND POINT PROTECTOR.

No. 454,623. Patented June 23, 1891.

FIG. 3.

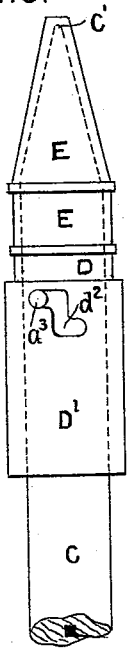


FIG. 4.

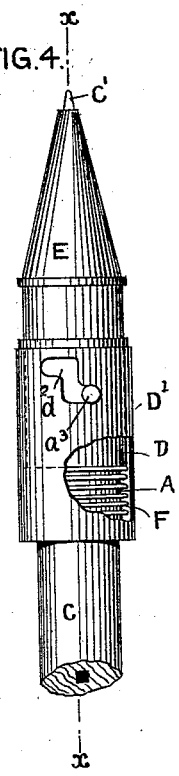


FIG. 5.

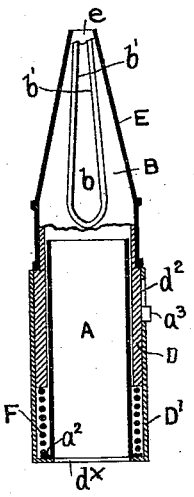


FIG. 6.

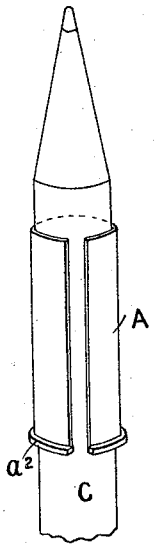


FIG. 7.

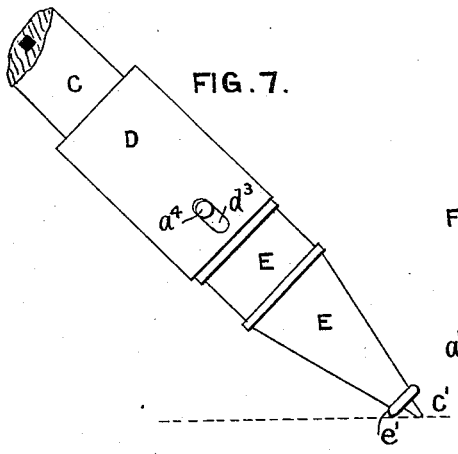


FIG. 1.

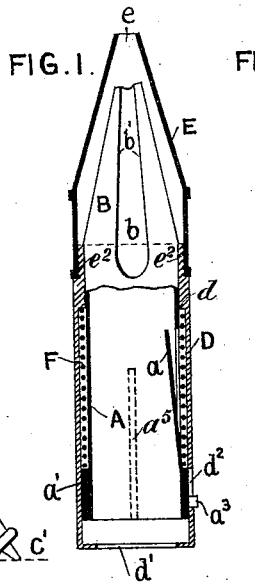
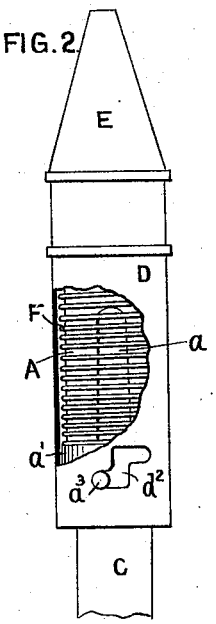


FIG. 2.



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UNITED STATES PATENT OFFICE.

HENRY BAUMGARTEN, OF LIVERPOOL, ENGLAND, ASSIGNOR OF ONE-HALF TO GEORGE HENDERSON THOMPSON, OF SAME PLACE, AND JOHN JAMES GREENWOOD, OF NEWPORT, ENGLAND.

PENCIL-SHARPENER AND POINT-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 454,623, dated June 23, 1891.

Application filed October 22, 1890. Serial No. 368,889. (No model.)

To all whom it may concern:

Be it known that I, HENRY BAUMGARTEN, rubber-stamp manufacturer, a citizen of the United States, and residing at Liverpool, in the county of Lancaster, in the Kingdom of England, have invented certain new and useful Improvements in Pencil-Sharpeners and Point-Protectors, of which the following is a specification.

This invention relates to pencil sharpeners and protectors, and has for its object a simple device adapted for sharpening lead-pencils and other crayons, pencils, &c., as required, and for protecting or shielding the point or sharpened end thereof in such a manner as to prevent it from being accidentally broken off in the pocket or otherwise. The device is so constructed that it can be readily taken off from one pencil or crayon and applied to another, as desired.

In the drawings, Figures 1 and 2 show one embodiment of my invention, Fig. 1 being a longitudinal section, partly in elevation, and Fig. 2 an elevation taken at right angles to Fig. 1, a part being also broken away. Figs. 3 to 6, inclusive, show another form of the device, Fig. 3 being an elevation showing the outward appearance of the parts when the point of the pencil is protected; Fig. 4, a similar view to the preceding, part being broken away, showing the appearance of the parts when the pencil is in use; Fig. 5, a part section on line $x\,x$ in Fig. 4, and Fig. 6 a perspective view showing a detached part of the device hereinafter more fully described. Fig. 7 is a view illustrating a slight modification of the device and its mode of application.

My device consists, generally speaking, of two parts—namely, the point-protector and the sharpener.

I will first describe the embodiment illustrated in Figs. 1 and 2. C is the pencil, (here represented as cylindrical,) and A is a tube which embraces and clasps it quite tightly. This tube may be made to clasp the body of the pencil in various ways. In Figs. 1 and 2 it is represented as provided with a spring clip or finger a, which presses elastically on the pencil-body. It may, however, be provided with a longitudinal slit a^5, as represented by dotted lines in Fig. 1, so that when pushed on the pencil it will grip the latter by its own elasticity in a well-known way. This slit may extend the entire length of the tube, as seen in Fig. 6, under some circumstances. On this tube A is mounted the ordinary conical cutter B for sharpening the pencil-point. This cutter will have the usual slit b and one or more cutting-edges b'. For sharpening slate-pencils, chalk-crayons, &c., these edges may be serrated or cut like files. D is an inclosing-sleeve which embrace the tube A and has a limited longitudinal sliding movement thereon. The sleeve D carries a conical cover E, which incloses the cutter B and takes over and protects the point C′ of the pencil normally. This cover has an aperture e in its apex, through which the pencil-point may protrude when the cover and sleeve are drawn back. Within the sleeve D and embracing the tube A is a coil-spring F, the ends of which abut, respectively, on a shoulder or collar a', formed exteriorly on the sleeve D. This spring serves to thrust or drive the cover E forward or outward normally, so as to house and protect the pencil-point C′. In order to limit the movement of the sleeve D and to hold it in both of its extreme positions, I employ a suitable limiting-retainer, which may be of any known kind. As herein shown, this retainer consists of a slot d^2 in the sleeve D and a stud a^3 on the tube A, which engages said slot. The slot has a main limiting portion, which extends parallel with the axis of the sleeve, and two locking portions or branches, which extend at right angles from said main portion. The sleeve is capable of rotation on the tube A, and this enables the user to so turn it as to cause the stud a^3 to engage any part of the slot, as will be readily understood. When the stud a^3 engages the lower locking branch, as seen in Fig. 2, the cover E will be held in its forward or protecting position, and when the cover is drawn back and the stud made to engage the other branch of the slot the cover will be locked in this position and the pencil-point C′ will protrude from the aperture e in the cover.

I will now describe the embodiment illustrated in Figs. 3 to 6, which differs from that

just described mainly in this: In the construction described the cutter B is carried by the tube A and does not move forward and back with the cover E, while in the construction of Figs. 3 to 6 the cutter B is carried by the sleeve D and moves forward and back with the cover. The tube A (seen detached in Fig. 6) is adapted to embrace and clasp the body of the pencil C, and is here represented as slitted throughout its entire length. The sleeve D slips over it, as before described, and the spring F is also arranged in the manner before described. The cutter B and cover E are both carried by the sleeve D, the latter being, by preference, merely slipped onto the reduced upper end thereof and held in place by friction, so that it may be conveniently removed. In Fig. 1 the cover E is represented as screwed onto the sleeve. The cutter B may be fixed permanently to the tube to which it is attached. D′ is an exterior sleeve which embraces the sleeve D and has an inturned flange $d^{\times}$ at its lower or rear end, which takes over the corresponding end of the tube A. In this construction the slot d^2 is formed in the exterior sleeve D′, and the stud a^3 is on the sleeve D. The exterior sleeve D′ is capable of rotation, but it does not move longitudinally. The sleeve D in Fig. 1 is represented as provided with an inturned flange d'; but this is only to give a finish to the device.

Fig. 7 illustrates a slight modification, in which the retaining device is omitted, and the cover E is provided with an annulus e' about the aperture e at its apex. When the pencil is applied to the paper, the annulus e' strikes the paper, and the cover E is thus pressed back automatically to an extent sufficient to expose the point C′ of the pencil, compressing the light spring F. When the pencil is removed, said spring again thrusts the cover forward to its protecting position. A limiting-slot d^3 and a stud a^4 serve to guide the parts and limit the extent of movement.

When the pencil has become worn down, the cover E may be removed and the pencil sharpened by turning it around in the cutter in the usual way.

My device can, if desired, be constructed only as a point-protector, the cutter B being omitted. The sides of the aperture e serve to some extent as a support for the pencil-point when the cover is drawn back. The entire device can be slipped off from the pencil by the exertion of very little force and be placed on another one. The spring F, which tends always to thrust the cover E forward over the point C′ of the pencil, is not absolutely essential to any of the embodiments shown, except that seen in Fig. 7, which is automatic. I much prefer, however, to employ the spring in the manner described.

My invention provides a protector for ordinary wooden pencils with fixed leads and is not adapted to metal crayon-holders with movable leads or crayons. I am aware that it is not new to provide such metal crayon-holders with a point-protector adapted to be driven out and in on the body of the holder by rotation; but this device is not adapted to the ordinary pencil. The tube A of my device embraces the body of an ordinary lead-pencil, and while removable therefrom, and, indeed, movable thereon, it remains normally a fixture on the pencil, while the cylindro-conical protector moves to and fro thereon to a limited extent.

Having thus described my invention, I claim—

1. In a point-protector for pencils and the like, the combination, with a tube A, which embraces and clasps the body of the pencil and remains normally a fixture thereon, of a sleeve D, which embraces and is capable of a limited longitudinal movement thereon, said tube, and a conical cover E, carried by said sleeve and having an aperture at its apex for the passage of the pencil-point, whereby said cover may be moved outwardly on the tube A to house and protect the said point and withdrawn to expose it, as set forth.

2. In a point-protector for pencils and the like, the combination, with a tube A, which embraces and clasps the body of the pencil, of a sliding sleeve D, which embraces said tube, a coil-spring F within said sleeve, its ends abutting against shoulders on the sleeve and tube, respectively, and a conical cover E, carried by the sleeve and having an aperture e at its apex for the passage of the pencil-point, said spring serving to thrust the sleeve forward longitudinally on said tube, substantially as and for the purpose set forth.

3. In a point-protector for pencils and the like, the combination, with a tube A to embrace and clasp the body of the pencil in a normally fixed and secure manner, of a sleeve D, which embraces and is capable of a limited longitudinal movement thereon, said tube, a conical cover E, carried by said sleeve and having an aperture at its apex for the passage of the pencil-point, said cover being movable forward to house and protect the pencil-point and movable backward on the pencil in order to expose said point, and a retainer for holding said cover in both of its extreme positions.

4. In a point-protector for pencils and the like, the combination, with a tube A to embrace and clasp the body of the pencil, of a sliding sleeve D, which embraces said tube, a coil-spring F within said sleeve and abutting at its ends against shoulders on the respective tube and sleeve, a conical cover E, carried by said sleeve and having an aperture at its apex for the passage of the pencil-point, and a retainer, substantially as described, for holding said sleeve and cover in both of their extreme positions.

5. In a point-protector and sharpener for pencils and the like, the combination, with a tube A, which embraces and clasps the body of the pencil in a normally fixed and secure manner, a tubular sleeve D, which embraces

said tube and is capable of a limited longitudinal movement thereon, a conical cover E, mounted on said sleeve and having an aperture *e* in its apex for the passage of the pencil-point, and a conical cutter B for sharpening the pencil, arranged within the cover E and carried by one of said tubular parts.

6. In a point-protector and sharpener for pencils, the combination, with the tube A, which embraces and clasps the body of the pencil and remains normally a fixture thereon, and the conical cutter B, carried by said tube, of a cylindro-conical point-protector which incloses said cutter and embraces a part of the tube A and has an aperture *e* at its apex for the passage of the pencil-point, said protector being movable longitudinally with respect to the tube A, as set forth.

7. In a point-protector and sharpener for pencils and the like, the combination, with the tubular part A to embrace and clasp the body of the pencil and the conical cutter B, carried thereby, of the longitudinally-sliding sleeve D, which embraces tube A, the coil-spring F within said sleeve and abutting at its ends against shoulders on the parts A and D, respectively, the conical cover E, carried by the sleeve D and having an aperture *e* at its apex for the passage of the pencil-point, and a retainer which holds the said sleeve in both of its extreme positions.

8. The combination, with the tube A, which embraces the body of the pencil, provided with a spring-clip *a* and a stud a^3, the sliding sleeve D, which embraces said tube, said sleeve having a branched slot d^2, engaging the stud a^3, the coil-spring F, arranged within said sleeve and abutting at its ends against shoulders on the tube and sleeve, respectively, the cutter B, carried by the tube A, and the conical cover E, carried by the sleeve D, all operating substantially as set forth.

9. The combination, with the tube to embrace and clasp the pencil, the cutter carried thereby, and the sleeve embracing said tube and having a limited longitudinal movement thereon, of the detachable conical cover E, carried by said sleeve and having an aperture at its apex for the passage of the pencil-point, substantially as set forth.

10. The combination, with a tube which embraces and clasps the body of the pencil, the cutter carried thereby, the sleeve embracing said tube and capable of a limited longitudinal movement thereon, and the conical apertured cover carried by said sleeve, of a spring F, adapted to normally thrust said cover forward over the point of the pencil.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY BAUMGARTEN.

Witnesses:
GEO. C. DYMOND,
CHAS. LESLIE.