

L. J. MOST.
PENCIL.

APPLICATION FILED AUG. 26, 1918.

1,420,275.

Patented June 20, 1922.

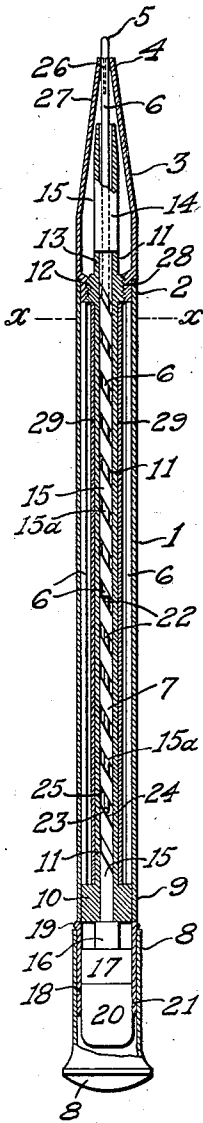


Fig. 1.

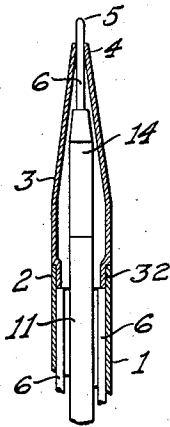


Fig. 3.

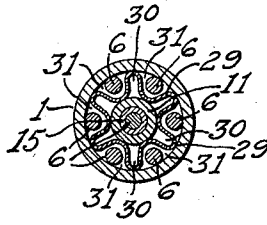


Fig. 2.

INVENTOR

Lucifer J. Most.
BY
Benjamin Roman.
ATTORNEY

UNITED STATES PATENT OFFICE.

LUCIFER J. MOST, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO
PENCIL PRODUCTS CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF
VIRGINIA.

PENCIL.

1,420,275.

Specification of Letters Patent. Patented June 20, 1922.

Application filed August 26, 1918. Serial No. 251,457.

To all whom it may concern:

Be it known that I, LUCIFER J. MOST, a citizen of the United States, and resident of the city of New York, in the county of New York and State of New York, have invented a certain new and useful Pencil, of which the following is a specification.

This invention relates to pencils, and particularly to the type provided with mechanism for projecting the lead forwardly as it wears away during use. Such pencils have a cap that engages the point of the lead to maintain it in operative state, and a magazine is usually provided at the rear end of the pencil for carrying supply leads for insertion at the writing end of the pencil. In order to replenish lead at the writing end of the pencil it is necessary to first remove the cover of the supply-lead magazine, then extracting a lead therefrom and hold it in hand, then closing this cover, then removing the lead-engaging cap, then inserting the lead into the writing end of the pencil, and then finally restoring said cap to normal operative position.

The principal object of my invention is to provide an improved pencil wherein the above mentioned operation is greatly simplified and saving of time incidental to its use effected, and the improvements of which will be also conducive greatly toward simplification, compactness, and effectiveness of construction, and to the convenience, efficiency, and reliability of its service.

Other objects and advantages will hereinafter appear.

In the accompanying drawings,—

Fig. 1 is a general sectional elevation of the pencil.

Fig. 2 is a cross-sectional plan view, on an enlarged scale, of the pencil shown in Fig. 1, taken on the line $x-x$ thereof.

Fig. 3 shows a modification of the pencil shown in Fig. 1.

The pencil comprises a tubular holder or casing or body portion 1 having at its writing end 2 a cap or closure 3, at the extremity 4 of which extends the point 5 of a lead 6 that is projected by mechanism 7, within the holder 1, operated by the rotation of a knob 8 located at the opposite end 9 of the holder. To the end 9 of holder 1 is secured a flange 10 forming part of the extremity of a tube 11 which extends within the holder 1 throughout its length and centrally along its longi-

tudinal axis, and is provided with a thread 12 at its opposite extremity 13 near the writing end 2 of the holder. Said tube serves as a bearing for a lead propeller comprising a guiding tube 14 for the lead 6, a narrower tubular stem 15, having a spiral propelling slot 15^a, extending from the guiding-tube 14 and passing through the bearing-tube 11, a shouldered extremity 16 of the stem 15 for retaining it in longitudinal position, and a flange 17 forming part of the extremity 16 of stem 15. To the flange 17 is secured a shell 18, the extremity 19 of which fits against the rim of the end 9 of the holder 1. An eraser 20 is fitted into the end 21 of shell 18 against the flange 17, and the knob 8 is adapted to slip fittingly over the shell 18, so as to cover the eraser 17 when it is not in use and cause the shell 18 to turn therewith upon its rotation. A propelling bar 22 located within the tubular stem 15 and along the axis thereof has a bent arm 23 which passes the spiral slot 15^a, whereby as the stem 15 is rotated, by manipulation of the knob 8, the edge 24 of slot 15^a bears against the arm 23 and forces the bar 22 to move toward the writing end of the pencil and project the lead 6 forwardly. Rotation of the knob 8 in an opposite direction causes the edge 25 of propelling-slot 15^a to bear against the arm 23 in an opposite manner and thereby draws the propelling bar 22 inwardly to permit insertion of a new lead. The cap 3 is provided with a split extremity 26 at its tapered end 27, and a tapped end 28 which passes into the end 2 of holder 1 and threads over the shoulder 12 of the bearing-tube 11. As the cap 3 is threaded in place its split extremity 26, which is springy, grips the point 5 of the active lead passing through the cap and thereby retains the lead against dislocation in a forward direction and in a proper writing position. When the point 5 wears out during the writing the knob 8 may be rotated and the lead 4 therewith propelled forwardly to project the point to the extent required.

Between the bearing-tube 11 and the wall of the holder 1 is located a corrugated shell 29, Fig. 2, which bears securely against said tube and wall and serves for efficiently spacing or steadying the tube 11 and the parts therewithin with relation to the axial centre line of the holder 1, and also as a magazine means for a half dozen reserve leads 6 that

are located between its corrugations 30 and the wall of the holder and from which the reserve leads may be slid when the closure cap 3 is removed from the body portion 1.

5 As the active lead passes through the closure cap 3 and is gripped thereby, when the closure cap is removed from the body portion, it carries with it the active lead so that the reserve leads in the magazine are free

10 from any interference with the active lead while they are being slid from the magazine. When the lead 6 that is being utilized (namely, the active lead) wears out completely and replenishment thereof is required, the knob 8 is rotated to draw inwardly the propelling bar 22 to the position shown, and then the cap 3 may be unthreaded and with its active lead, removed from the body portion, whereupon one of the reserve leads may be slid or removed from the magazine or receptacles 31, through the end 2 of holder 1, for insertion into the guiding-tube 14 in the position shown, after which the cap 3 may be again threaded in place and

25 restored to its operative position. The guiding tube 14, for the purpose of the claims is a part of the propelling mechanism and its principal function is to guide the active lead in its passage through the closure cap 3 and it is immaterial for the purpose of the claims whether or not this tube is carried by the body portion or the closure cap. The renewal of lead is thus readily, rapidly, and conveniently accomplished by the mere unthreading of cap 3 at the writing end of the pencil, extracting one of the leads 6 right thereat from the holder and inserting it into guiding-tube 14, and then restoring the cap 3 in operative position.

30 According to the modification shown in Fig. 3 the cap 3 slips into the end 2 of holder 1 and is held therein merely by friction as shown at 32, thereby obviating the need of a threading operation when removing the cap from and restoring it to operative relation with the holder 1. Should it be desired to utilize the eraser 20 during writing, the operating knob 8 may be readily removed, by merely slipping it off the shell 18, and the eraser thereby rendered available, while when the eraser is not in use the knob 8 may be restored in place and manipulated to operate the lead projecting mechanism.

Variations may be resorted to within the scope of the invention.

A very important advantage resides in the fact that the inner nozzle projects beyond the terminal of the barrel proper. When it is desired to replenish the supply of lead in the central tubular member, the outer nozzle is removed and the end of the inner nozzle, which is rigid, is tapped forcibly against the hand or other suitable support. As this is done all of the leads in the magazine will be

projected simultaneously against the hand or the support. In this position the leads are easily accessible—one can be withdrawn and inserted in the rigid nozzle. The primary point that should be borne in mind is that the rigid inner nozzle serves as a limit or stop to the advance or projection of the leads from the magazine—the leads will be projected against the hand or support only a distance equivalent to the extent of the nozzle. Still another advantage of this arrangement is that the leads when advanced are supported or braced towards their inner extremities by the screw-threaded base of the rigid nozzle and this precludes any likelihood of breaking the leads, due to their inherent thickness and fragility, as they are severally withdrawn.

Having thus described my invention, I claim:—

1. In combination in a pencil, a body portion, a lead propelling mechanism therein, a magazine within the body, reserve leads in said magazine adapted to be slid therefrom, an active lead in said propelling mechanism, a removable closure cap for the body portion, the active lead projecting through said cap, and means on said cap for gripping said active lead whereby when the cap is removed, the active lead is also removed from the propelling mechanism, leaving the reserve leads in the magazine free from interference with the active lead.

2. In combination in a pencil, a body portion, a lead propelling mechanism therein, a hollow tube, a magazine within the body, reserve leads in said magazine adapted to be slid therefrom, an active lead in said hollow tube, a removable closure cap for the body portion, the active lead projecting through said cap, and means on said cap for gripping said active lead, whereby when the cap is removed the active lead is also removed from the hollow tube leaving the reserve leads in the magazine free from interference with the active lead.

3. In combination in a pencil, a body portion, a lead propelling mechanism terminating in a hollow nozzle, a magazine within the body, reserve leads in said magazine adapted to be slid therefrom to a point coextensive with the end of said nozzle, an active lead in said hollow nozzle, a removable closure cap for the body portion, the active lead projecting through said cap, and means on said cap for gripping said active lead whereby when the cap is removed the active lead is also removed from the nozzle leaving the reserve leads in the magazine free from interference with the active lead.

Signed at the city of New York, in the county of New York, and State of New York, this 22nd day of August, A. D. 1918.

LUCIFER J. MOST.