

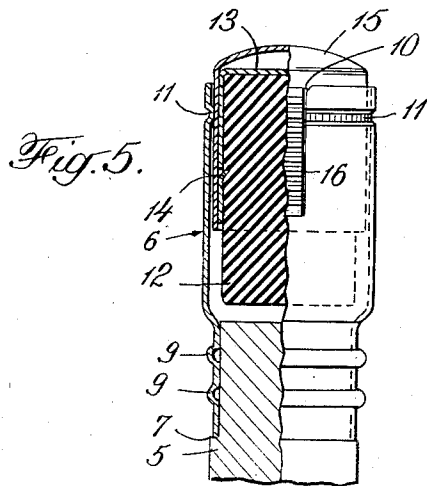
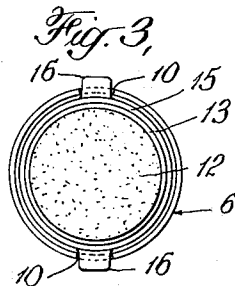
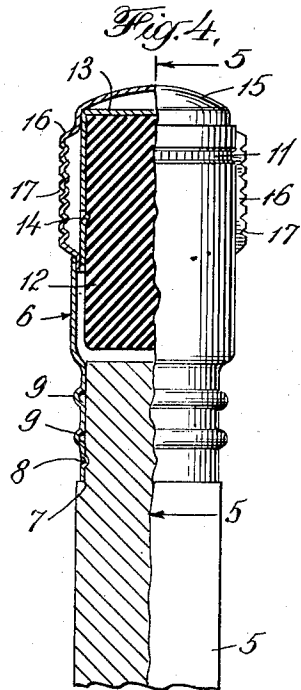
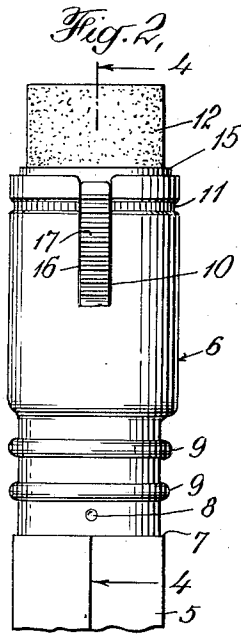
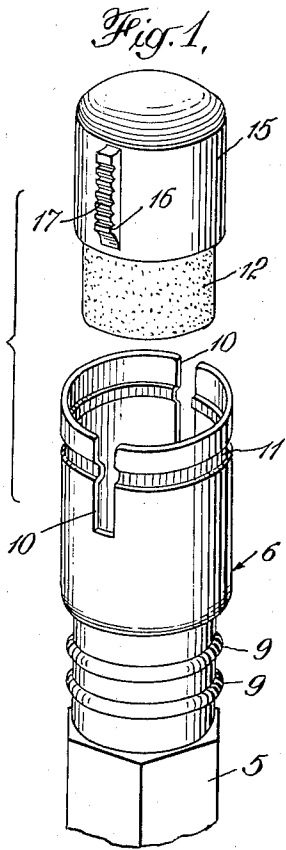
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REVERSIBLE ERASER TIP

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# UNITED STATES PATENT OFFICE

2,239,526

## REVERSIBLE ERASER TIP

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3 Claims. (Cl. 120—38)

This invention relates to erasers for pencils and particularly to a tip embodying a reversible eraser which may be disposed readily for effective use or concealed in a tubular holder or ferrule at the end of the pencil to afford a pleasing appearance to the pencil. While the invention is designed particularly for use with so-called mechanical pencils, it may be applied also to ordinary pencils employing a lead enclosed within a sheath of wood or other material.

In the case of mechanical pencils particularly, numerous attempts have been made to afford an eraser which can be concealed when not in use. Erasers are likely to become soiled and worn in use and detract from the appearance of the pencil if left in operative position. Caps adapted to cover the eraser are sometimes used, but these are likely to become lost and are otherwise unsatisfactory. Some pencils are provided with caps enclosing an eraser which may be reversed when the cap is removed, but the operation of removing and reversing the eraser is tedious, and the device does not therefore fulfil the requirement of a simple and easily manipulatable eraser tip. All of the devices heretofore proposed afford some disadvantage.

It is the object of the present invention to provide a simple and effective reversible eraser which may be withdrawn instantaneously and reinserted in the desired position, either to expose the eraser or to afford finished appearance to the pencil with the eraser concealed and protected.

Other objects and advantages of the invention will be apparent as it is better understood by reference to the following specification and the accompanying drawing, in which

Fig. 1 is a view in perspective of the tip with the eraser cap withdrawn;

Fig. 2 is a vertical elevation of the tip with the eraser cap disposed therein so as to expose the eraser;

Fig. 3 is a plan view of the top of the device as shown in Fig. 2;

Fig. 4 is an elevation partially in section on the line 4—4 of Fig. 2; and

Fig. 5 is a similar view on the line 5—5 of Fig. 4.

In carrying out the invention, I provide a tip comprising a tubular holder or ferrule adapted to be applied in any suitable manner to the end of a mechanical or other type of pencil and a reversible cap holding the eraser and provided with projecting ears which engage limiting slots in the body of the ferrule. These ears afford a

means for quickly grasping and withdrawing the eraser cap from the tip, so that it may be reinserted with the eraser exposed or concealed as may be desired. The ferrule and cap may be made of any suitable material which affords sufficient frictional engagement through resilience or otherwise to hold the eraser cap securely in either of its adjusted positions. Conveniently, any suitable metal may be employed, but other materials and particularly plastic materials which are commonly molded to form various objects are likewise suitable for the purpose.

Referring to the drawing, 5 indicates a body of a pencil which may be of the ordinary wood sheath type, although as indicated the device is designed particularly for use with mechanical pencils. The mechanism of the latter type of pencil forms no part of the present invention, and is not illustrated.

The tubular holder or ferrule 6 is secured preferably upon a shoulder 7 at the end of the pencil by friction, an adhesive, or otherwise. As is usual in pencil construction, an indentation 8 may be employed to securely hold the ferrule upon the end of the pencil. The particular form of the ferrule is unimportant, but it should be designed to have a decorative appearance and may, for example, be provided with projecting rings 9. The upper part of the ferrule may be of the same dimension as the lower, but preferably it is somewhat enlarged, as indicated in the drawing, to afford more space, thereby permitting the use of an enlarged eraser. The ferrule is provided with two longitudinally disposed slots 10 and is preferably stiffened by means of a circular recess 11, thus affording better frictional engagement and more security in holding the eraser cap.

The eraser 12, preferably of a suitable rubber composition, is secured in a holder 13 of metal or other suitable material, preferably by means of a lug 14 which is struck from the surface of the holder. The holder is in turn disposed within a metal cap 15, into which it fits tightly, and is held by frictional contact. Thus, when the eraser becomes worn, it may be withdrawn from the cap and replaced. The cap is preferably designed to afford a decorative appearance, and need not be discarded when a new eraser is required.

The cap 15 is provided with two projecting ears 16 on opposite sides, the ears being provided preferably with serrations 17 adapted to afford a better grip. When the cap 15 is pushed into the ferrule in either position, that is with the

eraser reversed as indicated in Fig. 1 or exposed as indicated in Fig. 2, the ears 16 engage the slots 10, and the latter limit the movement of the cap 15 which is held frictionally in the ferrule. Normally when the pencil is not in use, the eraser will be reversed and concealed within the ferrule, as indicated in Figs. 4 and 5. When the eraser is to be used, the ears 16 may be gripped with the fingers and withdrawn, whereupon the cap may be reinserted readily in the position indicated in Fig. 2, so that the eraser is available for use.

As will be apparent from the foregoing description and from the drawing, the ferrule and cap when arranged to enclose the eraser afford a decorative appearance to the pencil. The worn or soiled eraser is enclosed. However, by a simple manipulation, the eraser may be exposed for use. No difficult manipulation is involved, and no separate parts are withdrawn and possibly mislaid in the operation. The device affords, therefore, a satisfactory as well as an inexpensive eraser tip for pencils.

While the invention is designed particularly as a tip to be permanently fastened to a pencil, it is equally useful when applied to a separable or "slip-on" tip which is secured to the pencil by friction or otherwise. Such a tip may be made in various forms embodying the subject matter of the invention.

Various changes may be made in the structure and arrangement of the parts without departing from the invention or sacrificing any of the advantages thereof.

**I claim:**

1. A reversible eraser device for pencils comprising a ferrule of inherently resilient material having a free slotted end, said free end of the ferrule having an inwardly depressed groove intermediate the ends of the slots, a cap for holding an eraser receivable in the free end of the ferrule, the cross-sectional shape of the cap generally conforming to the cross-sectional shape of the free end of the ferrule, ears formed on the cap adapted to be received in said slots, the relative sizes of the cap and the free end of the ferrule being such that when the cap is inserted

in the free end of the ferrule the slotted end thereof is expanded and the cap is frictionally retained therein by the gripping action of the inner face of the depressed groove against the cap.

2. A reversible eraser device for pencils comprising a ferrule of inherently resilient material having a free slotted end, said free end of the ferrule having an inwardly depressed groove intermediate the ends of the slots, a cap for holding an eraser receivable in the free end of the ferrule, the cross-sectional shape of the cap generally conforming to the cross-sectional shape of the free end of the ferrule, said cap having serrated ears pressed outwardly from the body thereof, said ears being adapted to be received in said slots and of such size that when the cap is inserted in the ferrule the serrated portions will extend outwardly beyond the slots, the inner ends of the slots affording stops engageable by the outwardly extending ears to limit the inward movement of the cap, the relative sizes of the cap and the free end of the ferrule being such that when the cap is inserted in the free end of the ferrule the slotted end thereof is expanded and the cap is frictionally retained therein by the gripping action of the inner face of the depressed groove against the cap.

3. A reversible eraser device for pencils comprising a ferrule of inherently resilient material having a free slotted end, said free end of the ferrule having an inwardly depressed stiffening groove extending entirely therearound between the slots intermediate their ends, an eraser-holding cap having a continuous periphery receivable in the free end of the ferrule, the cross-sectional shape of the cap generally conforming to the cross-sectional shape of the free end of the ferrule, ears formed on the cap adapted to be received in said slots, the relative sizes of the cap and the free end of the ferrule being such that when the cap is inserted in the free end of the ferrule the slotted end thereof is expanded and the cap is frictionally retained therein by the gripping action of the inner face of the depressed groove against the cap.

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