

No Model.)

N. C. STILES.
ERASER.

No. 594,496.

Patented Nov. 30, 1897.

Fig. 1.

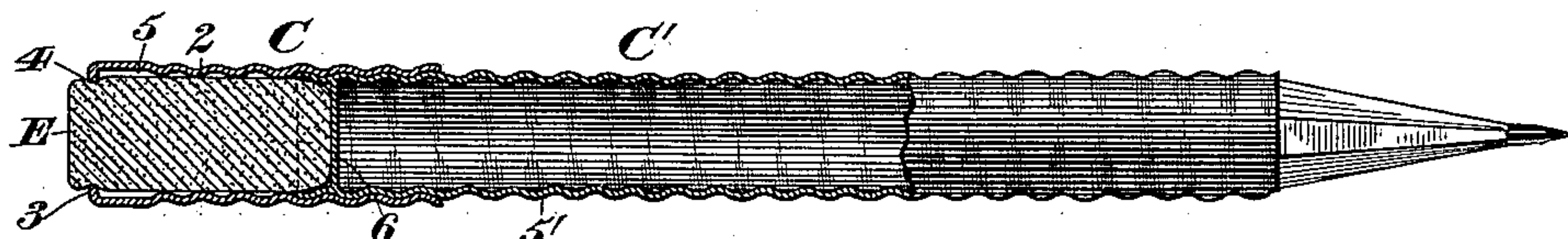


Fig. 2.

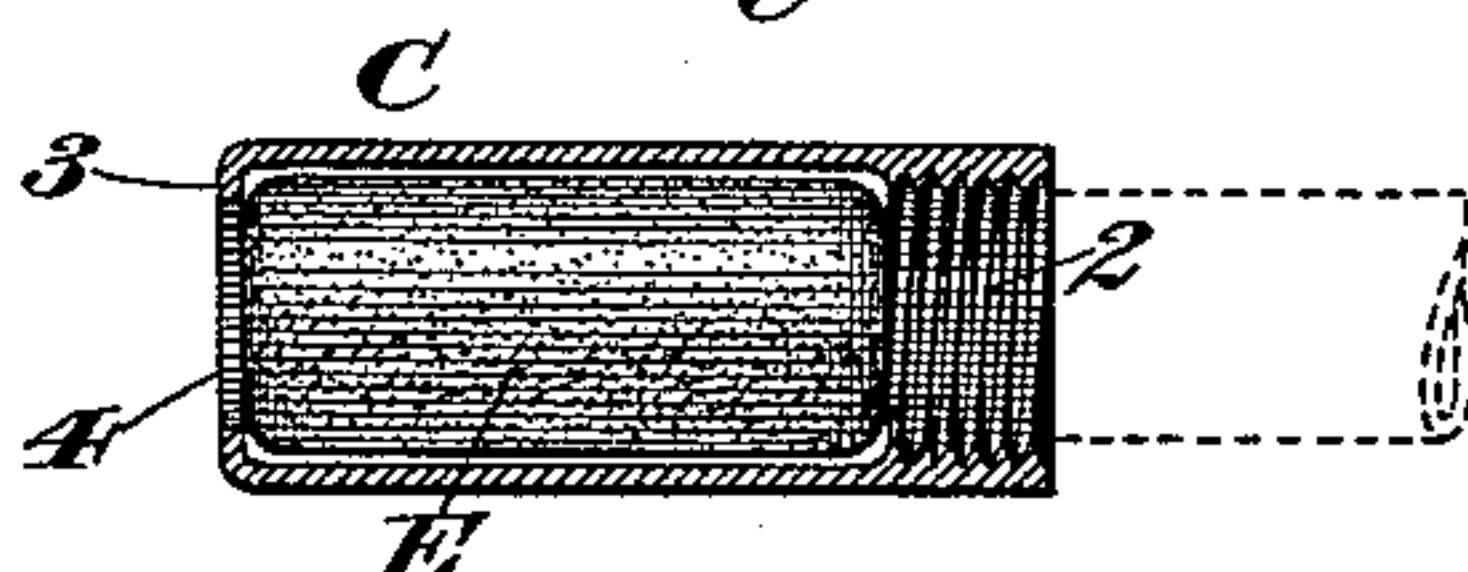


Fig. 4.

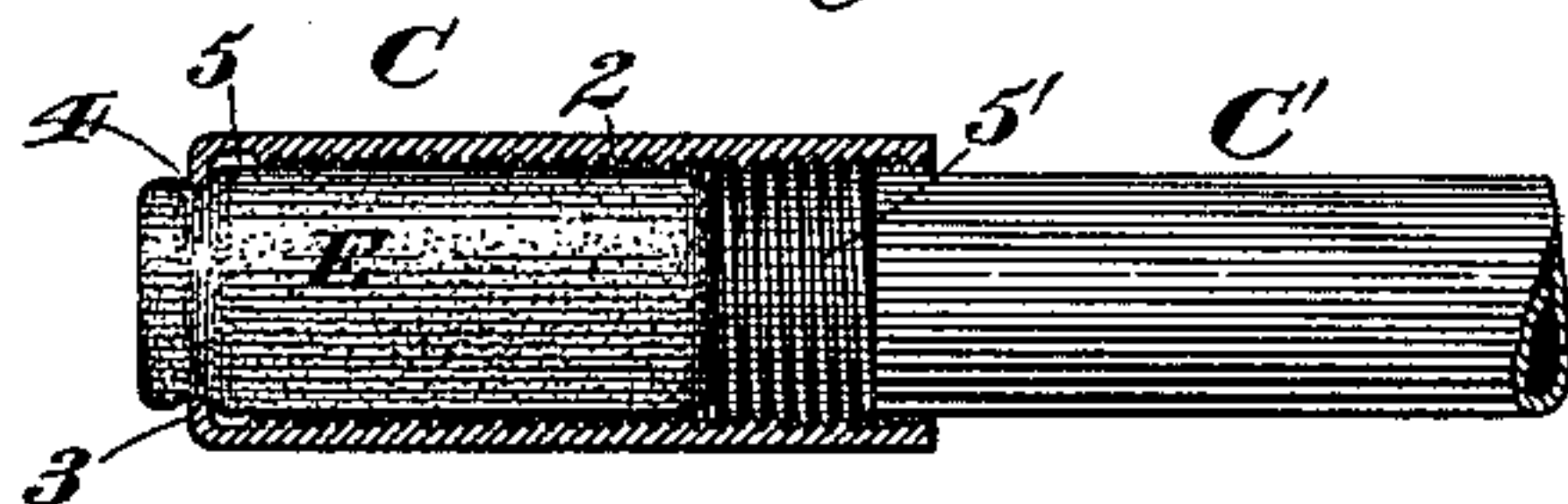
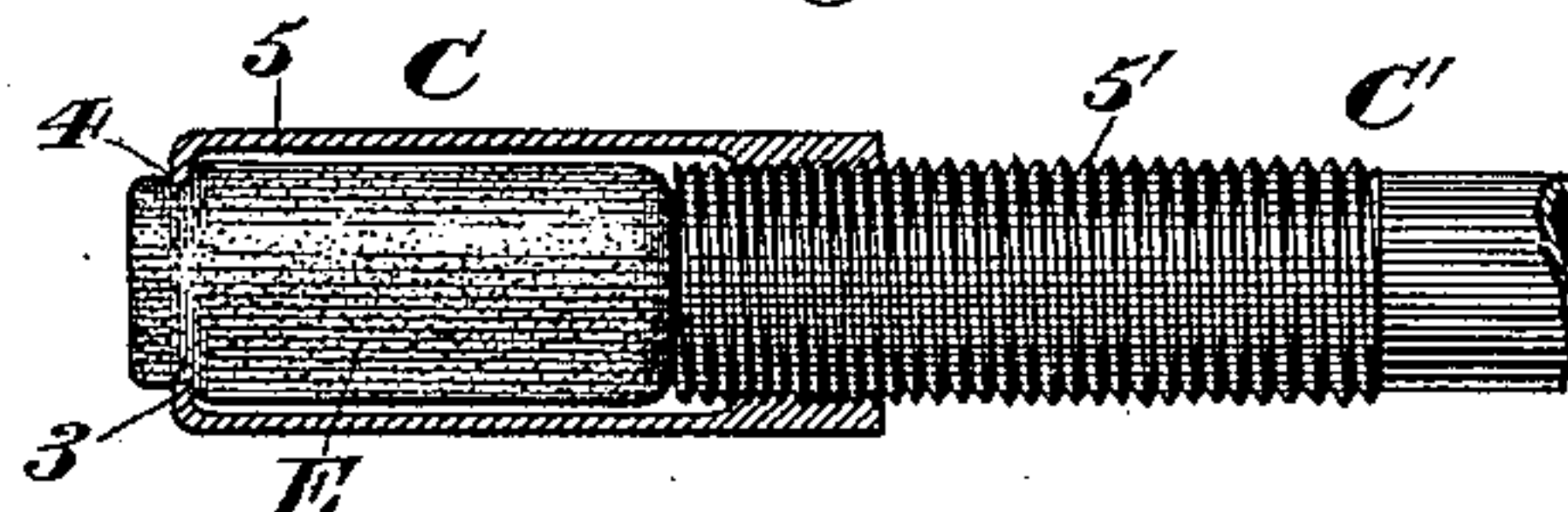


Fig. 3.



Witnesses;
Chas. W. Smith
Frederic J. Dole

Inventor,
Norman C. Stiles.
By his Attorney,
F. A. Richards.

UNITED STATES PATENT OFFICE.

NORMAN C. STILES, OF WATERTOWN, NEW YORK.

ERASER.

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Application filed February 15, 1897. Serial No. 623,408. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. STILES, a citizen of the United States, residing in Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Erasive Implements, of which the following is a specification.

This invention relates to erasive implements or holders, the object of the invention being to furnish a compact, light, and efficient implement or holder of the class specified adapted for use in connection with pencils and analogous articles, and which implement or holder comprehends an eraser and two relatively-adjustable members, one of which constitutes a carrying member for the eraser and embodies a compression-chamber and the other of which constitutes a compressing member and is adjustable longitudinally within the carrying member, the construction and organization of said members being such that by simple inward adjustment of the two members the eraser will be forced with its outer end slightly beyond the outer end of the carrying member and will be simultaneously distended laterally by longitudinal compression to substantially fill the compression-chamber of said carrying member and thereby securely hold the eraser in place and prevent accidental longitudinal movement thereof.

To this end the invention comprises in part an eraser-carrying member open at the inner and outer ends thereof and having intermediate said ends a compression-chamber of larger diameter than the diameter of the opening at the outer end, a distensible eraser or erasive substance supported within the compression-chamber, and a compressing member adjustably secured in the inner end of the carrier member, whereby on the adjustment of the two members toward each other the eraser or erasive substance will have the outer end thereof forced a short distance through the outer end of the carrier and will be simultaneously distended by compression to substantially fill the enlarged compression-chamber and thereby prevent the accidental longitudinal displacement of said eraser, all of which will be hereinafter more fully described.

In the drawings accompanying and forming

part of this specification, Figure 1 is a side elevation, partially in section, of one form of erasive implement embodying my present invention and showing the same in connection with a lead-pencil point, said figure showing the two adjustable members spirally corrugated circumferentially and internally from end to end to facilitate the screwing of one member into the other and also to furnish an ornamental structure. Fig. 2 is a longitudinal section of a slightly-modified form of an eraser-carrying member, showing a portion of the compressing member in dotted lines and showing a cylindrical non-distended eraser loosely contained within the compression-chamber of the carrier. Fig. 3 is a longitudinal section of the eraser-carrying member shown in Fig. 2, said figure also showing in full lines the compressing member adjusted to compress the eraser and force the outer end thereof partially through the outer end opening of the carrying member; and Fig. 4 is a view similar to Fig. 3 of a portion of another slightly-modified form of erasive implement.

Similar characters designate like parts in all the figures of the drawings.

The erasive implement in the preferred construction and organization thereof shown most clearly in Fig. 1 comprises two tubular members, (designated in a general way by C and C', respectively,) one of which constitutes a compressing member or handle and is supported within the other, as C, for adjustment longitudinally thereof, and the other of which constitutes an eraser-carrier or handle-cap and is opened at the outer end thereof and has a compression-chamber of relatively large diameter as compared with the diameter of said opening, and a distensible eraser or erasive substance E, supported for longitudinal adjustment and lateral distention within the compression-chamber of the carrier.

The eraser-carrier or handle-cap C in the preferred embodiment thereof shown in the accompanying drawings is in the nature of a tube, which is internally screw-threaded at 2 at the inner end thereof and has at the outer end thereof an inwardly-projecting annular flange 3 for engaging the eraser, the opening 4 thereof being of smaller diameter than the

interior 5 of the central portion of the carrier, which portion constitutes a compression-chamber for the eraser E.

In the drawings I have shown three slightly-modified forms of erasive implements, all of which embody the essential features of my present invention.

It is desired to state in the above connection that the constituent elements of the erasive implement may be variously modified within reasonable limits without departure from my present invention.

The compressing member C', which is shown in the nature of a tube or tubular handle adapted to receive a lead-pencil or which may constitute the handle of a pen, is externally screw-threaded, as shown at 5, at the inner end thereof, and is screwed into the inner end of the eraser-carrier C, as shown in the several figures of the drawings, said member having a bearing at the inner end thereof against the inner end of the eraser E, as shown in the several figures of the drawings.

In some cases to secure a proper bearing against the inner end of the eraser the compressing member or handle will have a transverse bearing-plate, such as shown at 6 in Fig. 1 of the drawings, this being preferable if the walls of the compressing member are very thin.

As shown in Fig. 1, the transverse bearing-plate is located slightly remote from the extreme inner end of the tubular compressing member C', so that a portion of the inner end of the eraser E will be incased by the extreme inner end portion of the member C' or that portion in advance of the bearing-plate 6.

In other cases where the walls of the compressing member are sufficiently thick at the inner end thereof the transverse bearing-plate may be dispensed with, but it is preferable to either provide a transverse bearing-plate at the inner end of the compressing member or to plug this end to secure a proper abutment for the inner end of the eraser.

In Fig. 1 the eraser-carrier C is shown formed of thin tubing externally and internally corrugated spirally from the inner end to a point in close proximity to the outer end thereof to form threads, and the extreme outer edge is turned inward to form the annular flange 3, the diameter of the opening of which is less than the internal diameter of the other portion of the carrying member, the carrying member being shown symmetrical from the extreme inner end to the inner face of the outer end flange, that portion of this member between the bearing face or plate 6 of the compressing member and the end flange 3 of the carrying member constituting the compression-chamber 5 for the eraser E.

The eraser E will preferably be constructed of pliable erasive rubber and of the form shown in the drawings. The diameter of the screw-threaded opening at the inner end of the eraser-carrier will in practice be at least

equal to the normal diameter of the eraser. The opening 4 at the outer end of said carrier will in practice be of slightly less diameter than the normal diameter of said eraser, and the diameter of the compression-chamber 5 will be slightly greater than the normal diameter of said eraser, so as to permit lateral distention of the eraser within said chamber as the compressing member or handle is adjusted inwardly and longitudinally with relation to the eraser-carrying member to compress the eraser endwise.

In Fig. 2 of the drawings the interior of the screw-threaded inner end of the eraser-carrier is shown of slightly less diameter than the diameter of the compression-chamber 5 and of slightly greater diameter than the diameter of the opening at the outer end of said carrier to thereby permit the cylindrical eraser to be readily inserted through the opening at the inner end of said carrier and still prevent the same from dropping out through the opening at the outer end thereof.

By a comparison of the several figures of the drawings it will be readily apparent that when the eraser is distended by compression and the outer end thereof is forced through the relatively small opening in the outer end of the carrier C the resistance exerted by said eraser will not only prevent the rotation thereof within said carrier, but will also prevent accidental unscrewing of the carrier C and handle C', and especially is this so with the construction illustrated in Fig. 1, where the inner end of the eraser is incased by and fills the open inner end of the handle C'.

As the outer projecting end of the eraser is worn away by use the two members C and C' may be adjusted inwardly to advance the eraser and compensate for wear. Thus it will be seen that the eraser may be entirely used up and a new one inserted when required.

Having described my invention, I claim—

1. An erasive implement comprising a tubular eraser-carrier internally screw-threaded at the inner end thereof and having an inwardly-projecting annular flange at the outer end thereof and also having a compression-chamber, intermediate the inner and outer ends, of larger diameter than the internal diameter of the annular flange; a compressing member having a screw-threaded inner end seated in the screw-threaded end of the carrier, for adjustment longitudinally thereof to compress the eraser; and a distensible eraser having a portion thereof located within the compression-chamber of said carrier and abutting against the inner end of the compressing member.

2. In an implement of the class specified, the combination, with a tubular handle having external screw-threads at the inner end thereof and also having a transverse eraser-engaging portion or plate, of a tubular eraser-carrier having the inner end thereof screwed upon the handle and having the outer end thereof turned inward to form an annular

flange, and said holder also having, intermediate the end of the holder and the inner face of said flange, a compression-chamber of larger diameter than the internal diameter of said flange; and a distensible cylindrical rubber movably supported in the compression-chamber and having a portion thereof projecting beyond the outer end of said carrier.

3. In an erasive implement, the combination, with an elongated tubular handle having a transverse bearing-plate near the inner end thereof, of a tubular eraser-carrier screwed upon said holder and having a relatively-contracted opening at the outer end thereof; and a pliable eraser located in the carrier and with its end in bearing engagement with the bearing-plate of the holder and having a portion of the outer end thereof extending through the opening in the outer end of said carrier.

4. In an implement of the class specified,

the combination of a tubular handle screw-threaded externally at the inner end thereof and adapted for receiving a lead-pencil; a tubular eraser-carrier internally screw-threaded at the inner end thereof and adjustably engaging the screw-threaded end of the handle and also having an inturned annular flange at the outer end thereof, the internal diameter of which is less than the internal diameter of the main body portion of the carrier; and a pliable eraser of greater normal diameter than the internal diameter of the inturned flange, located within the carrier with its inner end abutting against the inner end of the handle and having a portion of its outer end contracted and extended through the opening of the flange of said carrier.

NORMAN C. STILES.

Witnesses:

FRANCIS H. RICHARDS,
FRED. J. DOLE.