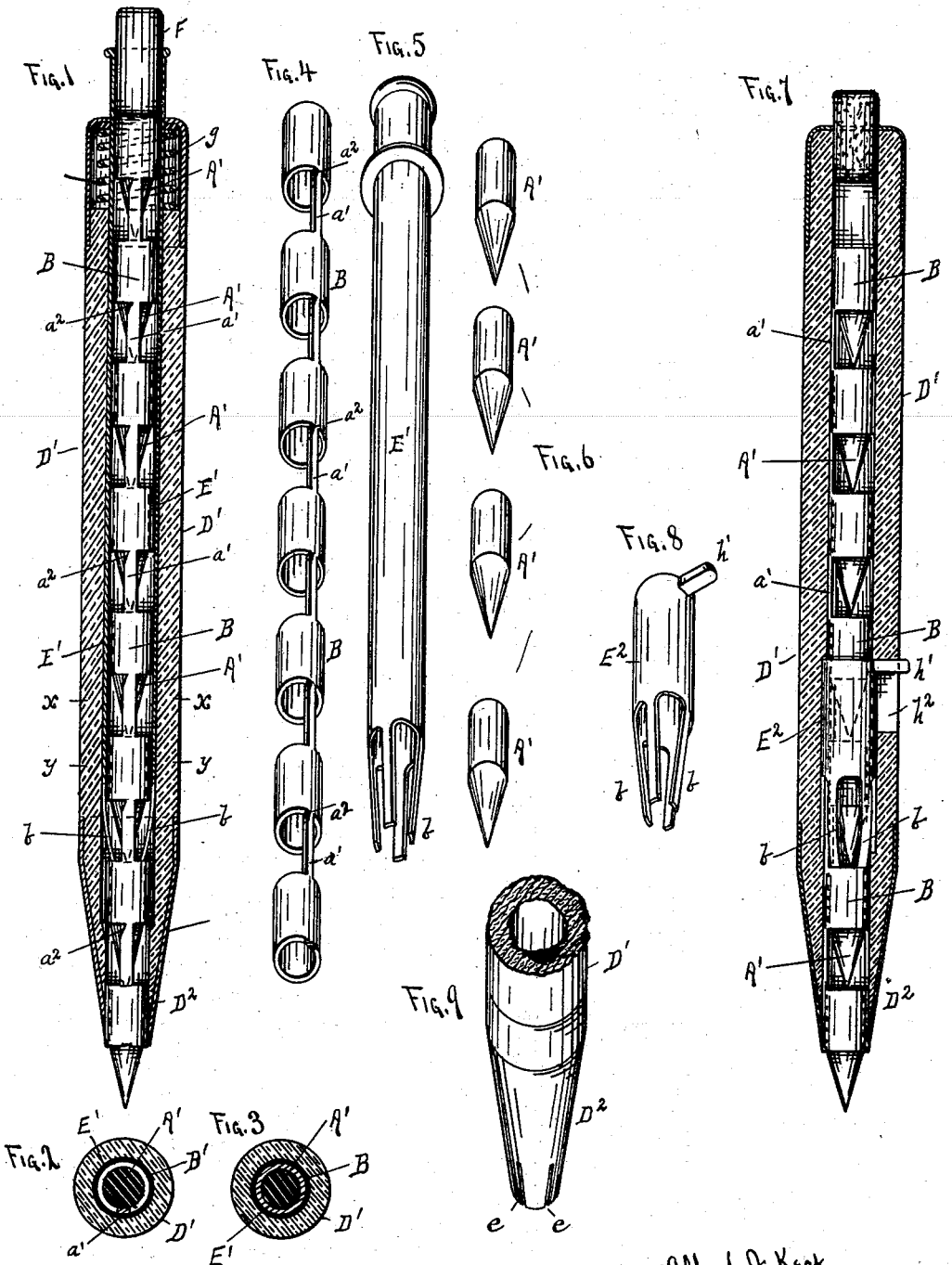
No. 650,078. Patented May 22, 1900.

A. J. KECK.

MAGAZINE PENCIL.

(Application filed Sept. 16, 1898.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

ALBERT J. KECK, OF ST. PAUL, MINNESOTA.

MAGAZINE-PENCIL.

SPECIFICATION forming part of Letters Patent No. 650,078, dated May 22, 1900.

Application filed September 16, 1898. Serial No. 691,108. (No model.)

To all whom it may concern:

Be it known that I, ALBERT J. KECK, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Magazine Lead-Pencils, of which the following is a specification.

This invention relates to pencil or crayon holders in which a series of short sections of the pencil are held in a holder and from which they are adapted to be ejected when required for use; and the invention consists in the construction, combination, and arrangement of parts, as hereinafter shown and described.

In the drawings illustrating the construction, Figure 1 is a sectional elevation showing the interior construction. Fig. 2 is a cross-section on the line $x\ x$ of Fig. 1. Fig. 3 is a cross-section on the line $y\ y$ of Fig. 1. Fig. 4 is a perspective view of one of the crayon or pencil holding tubes detached. Fig. 5 is a detached perspective view of the form of the ejector-tube employed in the modification shown in Fig. 1. Fig. 6 represents a number of the crayon or pencil sections detached. Fig. 7 is a view similar to Fig. 1, illustrating a modification in the construction. Fig. 8 is a perspective view of the form of ejector-tube employed in the modification shown in Fig. 7. Fig. 9 is a perspective view of the point or writing end of the outer shell, illustrating a modification in the construction.

A′ represents the sections of pencil or crayon, which may be of any suitable material and will preferably be "sharpened" or pointed at one end, as shown. The series of crayon or pencil sections will be inclosed in a tube B, the latter cut away or weakened, leaving sections or "membranes" a' at intervals corresponding to the joints between the sections of crayons, so that the sections of the tube B can be readily broken off when required. The solid portions of the tube B inclose about one-half of each crayon or pencil section and serve to assist in supporting the pencil-sections from lateral strains when in use, while the connecting membranes a' are of a length equal to the remaining half of the crayon or pencil, so that the pointed or writing portions of the pencil-sections come opposite the open spaces in the tube, as shown. At the point where the membranes a' are intended to break they will be weakened, as at a^2, so as to be sure to break only at those points.

The tube B, with its charge of crayon or pencil sections, will be inclosed in a casing or shell D′, out through whose lower pointed end D^2 the sections of crayon or pencil will be ejected, as hereinafter shown. Surrounding the tube B is an ejector-tube either the whole length of the shell D′ and projecting from the upper end, as shown in Fig. 1, in which E′ represents this tube, or in a short section E^2, as shown in Fig. 7. In both forms the lower end of the tube E′ or E^2 will be formed with converging spring-fingers b, adapted to engage the tube B and eject it, together with its contents, outward as fast as required. The lower end D^2 of the shell D′ is contracted so as to "pinch" the first section of the tube B with sufficient force to prevent the crayon or pencil sections from falling out by gravity, and the ferrule which forms the point of the shell may be formed with slits e, as shown in Fig. 9, which by their compression may be utilized to increase the "grip" upon the pencil or crayon sections.

In Fig. 1 the tube E′ is shown slidable outside the crayon or pencil tube B and held normally inward by a spring g. The tube E′ is formed open at the upper end and closed by a plug F, which may be of erasive material, such as rubber, so as to be utilized as an eraser.

In the modification shown in Fig. 7 the ejector-tube E^2 is shorter and is slidable about the crayon or pencil tube B for a short distance by a stud h', passing outward through a slot h^2 in the shell D′.

In both forms the fingers b engage with the tube B at the breakable cavities, so that as the tube E′ or E^2 is moved toward the end D^2 the tube B will be carried along with it a distance equal to the length of one of the pencil or crayon sections, and thus provide a fresh writing-point as often as required. As each new section of the tube B is thrust outward it is broken off at the point a^2 and the short section containing the section of crayon thrown away, leaving a portion of the next crayon protruding.

A number of the tubes B will be charged with

the series of the pencil or crayon sections A′ and provided in that shape for the user of the pencil, who has only to insert one of these charged tubes into the shell D′ to renew the pencil as fast as it is worn out. Thus with one shell or casing D′ and a number of the charged tubes B the "life" of the pencil may be prolonged to any extent. The charged tubes B may be sold at a trifling expense, while the shell D′ will cost but little more, so that the total cost of a shell and a set of the charged tubes will not be nearly as great and much more convenient than the same number of separate pencils.

The pencil or crayon sections being placed in the tubes D′ and sold in that shape are much more convenient than if the individual crayons were required to be inserted one at a time.

As before stated, the separate pencil or crayon sections A will preferably be pointed, as shown, so that as each section is worn down the new section ejected will have a point already thereon.

The construction and operation of the tube B whereby the pencil-sections are supported from lateral movement are important features of my invention, as the severe lateral strains to which the "points" are subjected are thereby resisted, and the tendency to vibrate under the pressure of writing is counteracted. The pencil-sections being necessarily short require a rigid support against lateral movement, and this lateral support is efficiently supplied by the solid portions of the tube B.

Having thus described my invention, what I claim as new is—

1. In a magazine-pencil, a tube having weakening cavities at uniform intervals, a series of pencil or crayon points corresponding in length to the distances between said cavities and adapted to be inserted into said tube and with the portion of the pencil-points within said tubular sections of the same diameter as the tube, whereby the pencil or crayon points are supported against lateral movement, substantially as and for the purpose set forth.

2. In a magazine-pencil, a tube having weakening cavities at intervals and adapted to receive and support a series of crayon or pencil sections corresponding in length to the distance between said cavities, an inclosing sheath for said breakable tube, an ejector slidable within said sheath and with spring-fingers engaging said weakening cavities, whereby said breakable tube may be ejected as required, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALBERT J. KECK.

In presence of—
C. N. WOODWARD,
FRED WISTROUS.