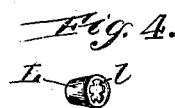
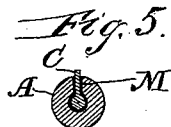
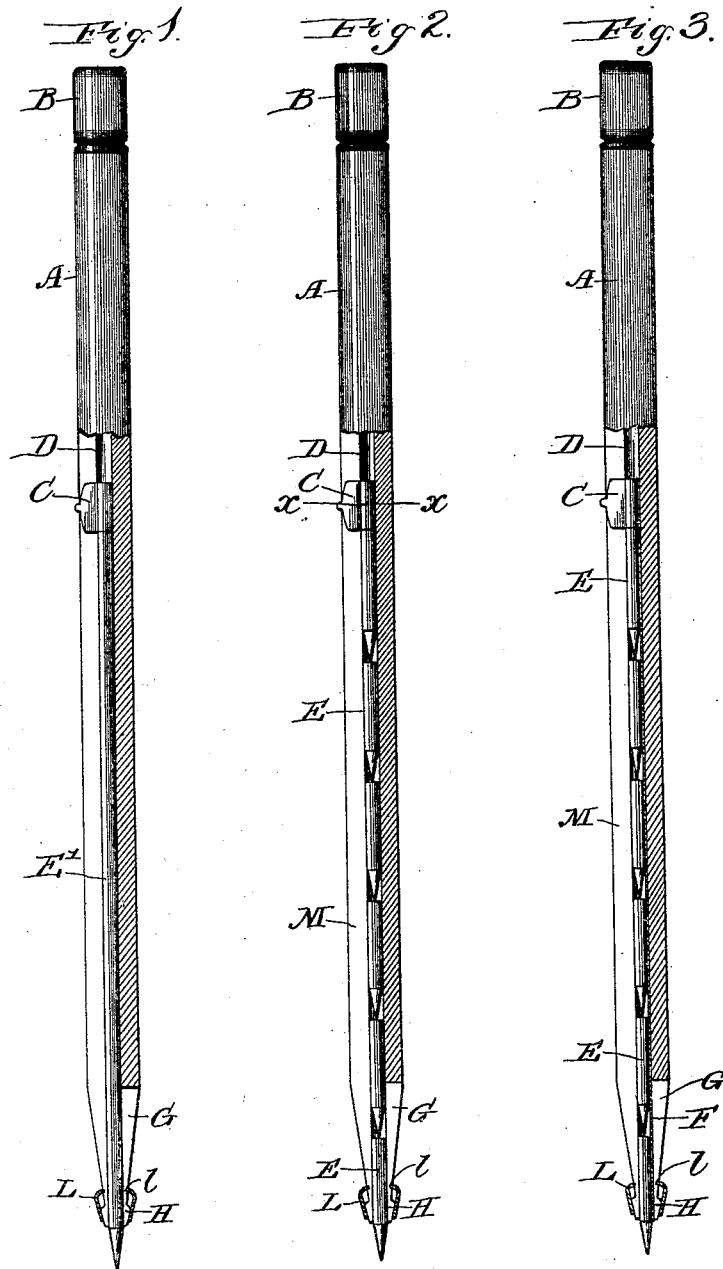


(No Model.)

A. J. ARTHUR.
PENCIL.

No. 493,464.

Patented Mar. 14, 1893.



Witnesses:
Wm. J. Fleming
J. M. Rheem.

Inventor:
Alexander J. Arthur
By Denton J. Hall atty.

UNITED STATES PATENT OFFICE.

ALEXANDER J. ARTHUR, OF FORT DODGE, IOWA.

PENCIL.

SPECIFICATION forming part of Letters Patent No. 493,464, dated March 14, 1893.

Application filed August 31, 1892. Serial No. 444,803. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER J. ARTHUR, a citizen of the United States, residing at Fort Dodge, in the county of Webster and State of Iowa, have invented a new and useful Improvement in Pencils, of which the following is a specification.

My invention relates to an improvement in pencils, and its object is to provide a simple cheap pencil the lead of which is kept practically sharpened without requiring the use of a knife, or other means for sharpening the point. I attain these objects by means of the mechanism, shown and described in the accompanying drawings, in which like reference letters refer to like parts throughout.

Figure 1 represents a longitudinal sectional view of my invention in which one continuous lead is shown. Fig. 2 shows a longitudinal sectional view of my invention provided with a series of pointed leads. Fig. 3 shows a longitudinal sectional view of my invention provided with a series of pointed leads mounted upon a strip of paper or other material. Fig. 4 is a detail view of a sleeve or thimble by which the point of the sheath or pencil holder is made to clamp and hold the lead point. Fig. 5 is a cross sectional view of Fig. 2 on the line $x-x$.

A represents the body or sheath of the pencil having a head B. The head may be integral with the body, or removable so as to admit of the introduction of the leads into the bore of the sheath at its rear end, as is common with many forms of pencils.

C represents a slide adjusted to the bore of the sheath and having a projection capable of sliding in a longitudinal slot in the sheath or barrel as shown, by means of which the lead in the bore may be moved outwardly.

D represents the bore of the sheath or barrel.

E represents the short pointed leads and E' a long unbroken lead.

The sheath or barrel is provided with a longitudinal slot that extends from the point of the pencil to its rear end, or as far as desirable. M represents one of the walls of this slot. At the point and opposite to the main longitudinal slot, is a short slot one of the walls of which is shown by the letter G.

Letter F, Fig. 3, shows a strip of paper or

other material upon which the short leads may be mounted. The point of the sheath or barrel is provided with a knob or shoulder H. This knob is slightly conical so that a sleeve or thimble L can be moved back and forth upon it operating as a clamp whereby the two halves of the point of the sheath or barrel separated by the two slots, may be pressed together so as to clasp and firmly hold the pencil lead as desired. The sleeve or thimble L is provided with a flange or rim or slight projections which fall behind the shoulder of the knob H and prevent the former from being wholly removed or from falling off. The diameter of the lead is such that it may be moved freely in the bore of the pencil and when the sleeve or thimble H is moved forward, the two parts of the sheath or barrel spring open into a normal position. By means of the slide C the lead or leads are then pressed forward until the point of the lead or of one of the short leads is in the desired position, when the sleeve L is pressed backward upon the conically shaped knob H clamping and closing the parts of the point of the sheath or barrel upon the lead and holding it firmly for use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a pencil the combination of a sheath or barrel provided with a bore to carry the pencil lead, and a longitudinal slot extending from the tip of the pencil backward to the rear end; also with a short longitudinal slot at the tip or point opposite the main longitudinal slot; the tip end of said sheath or barrel being conical in shape; with a slide adapted to move freely back and forth in said bore and longitudinal slot, and a sleeve or thimble adjustable to the form of the said tip and capable of being moved back and forth thereon whereby the two parts of said tip of the pencil may be clamped together or opened; all substantially as shown.

2. In a pencil the combination of a sheath or barrel provided with a bore to carry the pencil lead, and with a longitudinal slot extending from the tip of the pencil backward toward the rear end; also provided with a short longitudinal slot at the tip or point opposite the main longitudinal slot; the tip end

of said sheath or barrel being conical in shape; with a slide adapted to move freely in said bore and main longitudinal slot: a series of short pencil leads located and movable in said bore; and a sleeve or thimble adjusted to the form of said tip and capable of being moved back and forth thereon; all substantially as shown.

3. In a pencil the combination of a sheath or barrel provided with a bore to carry the pencil lead and with a main longitudinal slot extending from the tip of the pencil backward toward the rear end; also provided with a short longitudinal slot at the tip or point opposite the main longitudinal slot; the tip end of said sheath or barrel being conical in form and provided externally with a knob or shoulder; with a slide adapted to move freely in said bore and main longitudinal slot; a series of short pencil leads located and movable in said bore and a sleeve or thimble adjusted to the form of said tip provided with an interior flange or rim engaging with the shoulder of said tip, and capable of being moved back and forth thereon; all substantially as shown.

4. In a pencil the combination of the sheath or barrel provided with a bore, a main longitudinal slot, and a short slot at its tip oppo-

site said main slot, also provided near its tip with a conically shaped knob constituting a shoulder; with a slide adapted to move freely in said bore and main slot, and a sleeve adjusted to the form of said knob and capable of being moved back and forth thereon, and provided at its rear end with an inwardly extending projection adapted to engage with said shoulder; all substantially as shown.

5. In a pencil the combination of a sheath or barrel provided with a bore, a main longitudinal slot and a short slot at its tip opposite said main longitudinal slot; also provided near its tip with a conically shaped knob constituting a shoulder; with a slide adapted to move freely in said bore and main slot; a series of short pencil leads located and movable in said bore, said leads being connected and united by a strip of paper; and a sleeve or thimble adjusted to the form of said knob and movable thereon; all substantially as shown.

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

ALEXANDER J. ARTHUR.

Witnesses:

F. E. HUMPHREYS,
V. A. BLONGREN.