

N. B. Slayton, Fountain Pen.

No. 15622.

Patented Aug 26, 1856.

Fig 1

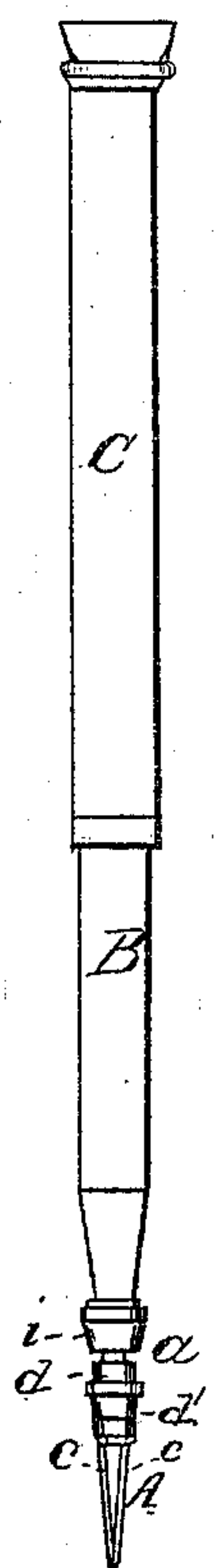


Fig 3

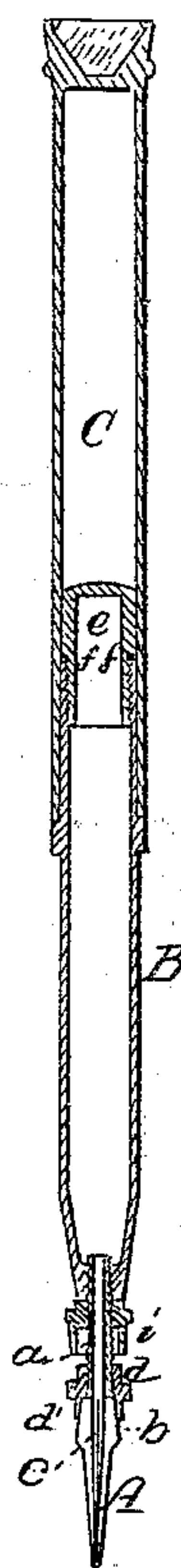


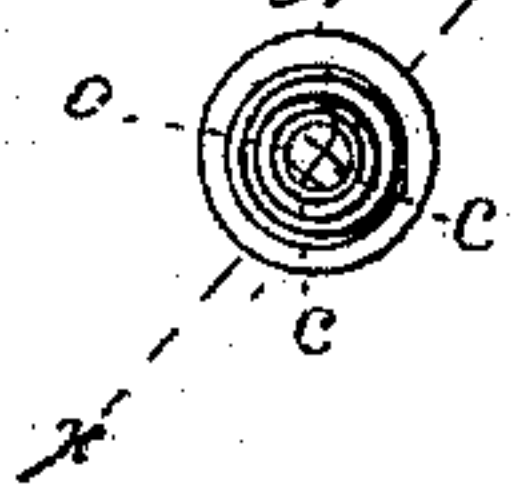
Fig 5.



Fig 4



Fig 2



UNITED STATES PATENT OFFICE.

NELSON B. SLAYTON, OF MADISON, INDIANA.

FOUNTAIN-PEN.

Specification of Letters Patent No. 15,622, dated August 26, 1856.

To all whom it may concern:

Be it known that I, NELSON B. SLAYTON, of Madison, in the county of Jefferson and State of Indiana, have invented a new and Improved Fountain-Pencil; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—
Figure 1, is a longitudinal outside view of the pencil. Fig. 2, is a view looking endwise toward the point of the same. Fig. 3, is a central longitudinal section of the same, in the line *x, x*, indicated in Fig. 2. Fig. 4, is a longitudinal view of the pencil detached from the reservoir showing the point spread open. Fig. 5, is a view to explain the manner of constructing the pencil.

Similar letters of reference indicate corresponding parts in the several figures.

This fountain pen consists of a tube tapering to a point and slit from the said point some distance up two or more sides, said tube being connected with an ink reservoir which is closed except at its connection with said tube. The ink remains confined within the reservoir and tube when the tube is at rest and its point not in contact with any surface, but is caused to flow through the tube and issue from the point thereof when the said point is moved in contact with the surface of a sheet of paper or of any other substance suitable for receiving an inscription in ink. The pencil, if provided with not less than three slits, works like a lead pencil, that is to say, it marks with the point turned in any position.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

A is the tube constituting the pencil.

B, is the ink reservoir. The reservoir is made of a cylindrical tube for the convenience of serving as the handle or part of the handle of the pencil, but is tapered for a short distance toward the bottom, where the tube A is attached to it. The tube A is made with a screw on its upper part to screw into a female screw in the bottom of the reservoir and when screwed into the reservoir is secured by a jam nut *i* outside the reservoir. The screw thread on the tube A is continued some distance lower than where the nut *i*, fits, as shown at *a*, Figs. 1 and 3, and from the lower extremity of the screw thread the said tube is enlarged conically for a short

distance, as indicated by *b*, and from the bottom of this conically enlarged part *b*, the tube tapers to a point of greater or less fineness. The said tube A is slit from the point up as far as the bottom of the screw thread. The slits, which in the example represented are four in number, are indicated by lines *c, c*, in Figs. 1, 2 and 3. The screw thread *a*, is fitted below the nut *i*', and outside of the reservoir, with a nut *d*', attached, to the bottom of which is a cup *d*', having a conical interior to fit the conical portion *b*, of the tube, for the purpose of keeping the slits *c, c*, as close as may be desired.

The reservoir B, is provided with a screw cap *e*, which is only removed for the purpose of filling it and then screwed on tightly, an air tight junction of the said cap with the reservoir being secured by means of a washer or gasket *f*, of leather or other yielding substance. This air-tight junction must at all times be preserved, as sufficient air will find its way through the slits *c, c*, and run up the interior of the pencil and reservoir to supply the place of the ink which flows from the pencil.

As a matter of convenience a portion E, of the handle or pen-holder, is made in the form of a movable cap, to be placed on the upper part of the exterior of the reservoir, as shown in Figs. 1 and 3, when the pencil is used, or to be inverted and placed on the lower part to serve as a protection to the point of the pencil when carried in the pocket or put away when not in use. This, however, is only one of many ways of constructing the handle or pen-holder, for the reservoir and pencil may be fitted to a holder of almost any of the constructions employed for common pens or ever-pointed pencils.

The method by which it is proposed generally to construct the pencil A, is first to make a tube of metal of the form shown in Fig. 5, which is a longitudinal outside view, which may be done by taking a piece of tube of a parallel bore of a size equal to that intended for the interior of the upper part of the pencil, say about one-sixteenth of an inch or more, and shaping its exterior by proper mechanical manipulations to produce the cone *b*, and to make the upper portion of the proper size to have the screw thread cut on it, and make the part below the cone which is to form the tapering point of the pencil, of a thickness greater or less, according as it may be desired to make the

pencil hard or flexible. After cutting the screw *a*, the slits are cut at equal distances apart of the taper form indicated by *c*, in Fig. 4, leaving the desired number of nibs *g, g*. The nuts *d*, and *i*, are next put on and the tube screwed into the reservoir, after which the nut *i*, is screwed up tightly against the bottom of the reservoir, and then, by screwing down the nut *d*, the conical cup *d'*, is made to draw the nibs together. The point formed by the union of the several nibs may be then ground to the degree of fineness desired. When thus constructed of metal of an elastic nature, the nibs of the pencil will have spring enough in them to open or separate of themselves and increase the width of the slits *c, c*, if the nut be turned upward on the screw, and by adjusting the nut higher or lower, the pencil may be set to make coarser or finer marks. When the pencil is put away after use, it will be desirable always to screw down the nut *d*, to draw the slits *c, c* as close as possible to prevent the escape of ink. Instead of employing the screw *a*, and jam nut *i*, to attach the pencil to the reservoir, it may be soldered thereto, or if a screw be used to attach the pencil to the reservoir, it would be well to make a screw of smaller diameter than *a* at the upper end of the tube to screw up to the reservoir with a shoulder, and to make the screw *a* and the said smaller screw, one right handed, and the other left handed, so that in screwing down the nut *d*, to compress the nibs of the

pencil, the pencil may not be unscrewed from the reservoir.

The ink to be used in this pen may be such as is used in common pens, or any liquid of similar or suitable character.

I do not confine myself to the particular method herein described, of constructing the pencil; but

What I claim as new and desire to secure by Letters Patent, is—

1. The fountain pencil consisting of a tube tapering to a point and slit from the said point, some distance up two or more sides, said tube being connected with an ink reservoir which is closed except at its connection with said tube, and from which the ink is caused to flow through the said tube and down the slits thereof, and issue from the point thereof, when the said point is moved in contact with a surface of suitable character to receive an inscription in ink, substantially as herein described.

2. And I also claim regulating the degree of fineness of the writing or marks produced, by means of a screw thread *a*, and cone *b*, on the exterior of the tube, and a nut *d*, carrying a conical cup *d'*, fitted to the said screw thread and cone, and acting in opposition to the elasticity of the nibs *g, g*, of the tube, substantially as herein described.

NELSON B. SLAYTON.

Witnesses:

WM. TUSCH,
I. F. BUCKLEY.