

No. 717,425.

Patented Dec. 30, 1902.

E. O. LYTE.

FOUNTAIN PEN WITH FILLER CARRIED IN THE HOLDER OF SAID PEN.

(Application filed Nov. 23, 1901.)

(No Model.)

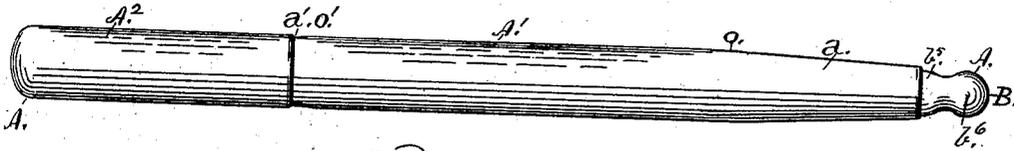


Fig. 1.

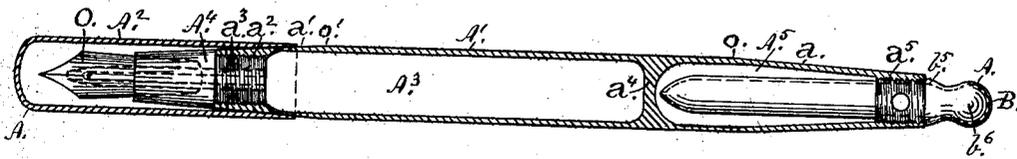


Fig. 2.

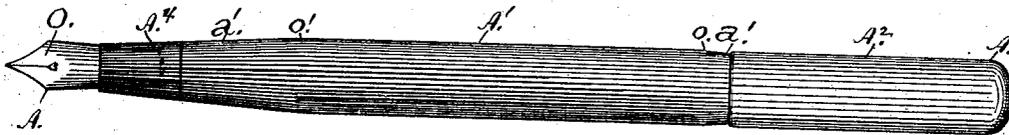


Fig. 3.

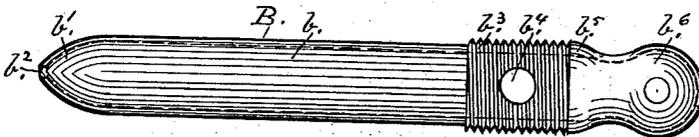


Fig. 4.

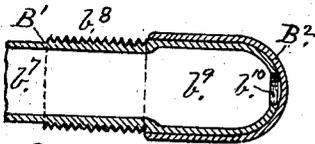


Fig. 6.

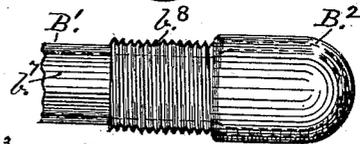


Fig. 6a.

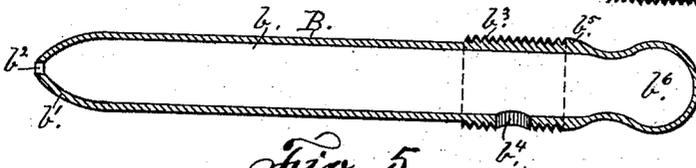


Fig. 5

Witnesses:

Fred. A. Montoya
Paul A. Herr

Inventor:

Elephant Gram Lyte.

By *Paul A. Herr.*
 Attorney.

UNITED STATES PATENT OFFICE.

ELIPHALET ORAM LYTE, OF MILLERSVILLE, PENNSYLVANIA.

FOUNTAIN-PEN WITH FILLER CARRIED IN THE HOLDER OF SAID PEN.

SPECIFICATION forming part of Letters Patent No. 717,425, dated December 30, 1902.

Application filed November 23, 1901. Serial No. 83,392. (No model.)

To all whom it may concern:

Be it known that I, ELIPHALET ORAM LYTE, a citizen of the United States, residing at Millersville, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Fountain-Pens with Fillers Carried in the Holders of Said Pens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a fountain-pen of that class in which a specially-constructed filler is carried in the penless end of the stem or holder, which it closes, effecting an ornamental or attractive finial at said end.

One object of the invention is to construct a fountain-filler without an elastic bulb or globule liable to break or come off, making the filler worthless until repaired; and another object of the invention is to have the filler always convenient or ready to hand when the fountain requires filling.

The elements of the invention will severally and at large appear in the following description, and they will be separately or combinedly set forth or pointed out in the claims hereto appended.

The purposes of the invention are attained by the devices and means illustrated in the accompanying drawings, similar reference characters designating like parts throughout the several views, in which—

Figure 1 is a full side view of a fountain-pen embodying the elements of the invention with a cap covering the pen and a filler in place; Fig. 2, a longitudinal central section of Fig. 1, the pen-holding head or tube in position, and the filler appearing in full side view, with dotted lines indicating an ink-feeding device in place; Fig. 3, a completed view of Fig. 2 with the pen uncovered and the cap placed over the filler; Fig. 4, a view of the filler as it appears when detached from Fig. 2 and enlarged; Fig. 5, a longitudinal central vertical section of Fig. 4 viewed from above; Fig. 6, a sectional view showing a part of a filler having a modified form of head with the air-vent in the end thereof and a cap closing

said vent, and Fig. 6^a a view of said head with said cap completed and covering the same.

In the drawings, A designates a completed pen of the character referred to in the opening paragraph hereto, in which a stem or holder A' of the required dimensions is made of any approved material, preferably cylindrical in form, but in this instance with tapering ends *a a'*, equally sloping and axially approaching from points *o o'*, so that a cap A² may be placed at pleasure on either end, covering the pen or the filler, and the outer extremity of the end *a* has a slightly less diameter than that of the end *a'*. Within the portion of the stem adjacent to its end *a'* is formed a practically cylindrical chamber A³, constituting the required ink receptacle, reservoir, or fountain carrying a supply of ink to be fed to the pen. This end through its extremity is provided with an internally-screw-threaded aperture *a²*, opening into said chamber. Into this aperture *a²* is screwed home the threaded end plug *a³* of a pen-holding head or tube A⁴, supporting a pen O, as shown, being provided with any approved ink-feeding device, as that indicated by the dotted lines *o²*, and continuing in external contour with that of said end *a'*, making it to correspond in size and shape with the end *a* before mentioned. Within said end *a* is formed a second chamber A⁵, separated from said former chamber A³ by a partition-wall *a⁴*, preferably integral with the surrounding wall of the stem, said chamber A⁵ constituting the filler-housing chamber of the invention; but this partition-wall may be omitted, when the fountain may be filled from the end opposite the pen. Opening from this chamber A⁵ and extending through the outer extremity of the end *a* is an internally-screw-threaded aperture *a⁵*, into which is screwed home the threaded portion of the filler, yet to be described, said chamber housing said filler and said aperture securely holding it in place.

The filler B of the invention is preferably a practically cylindrical body hollow throughout, being made of any approved material and having the desired dimensions. It comprises a straight and smooth portion *b*, with an ovoid or conically-pointed forward end *b'*, having an orifice *b²* in its point or tip, a screw-

threaded portion b^3 , with an orifice b^4 therein; but this orifice may be placed in the smooth portion b ; a surrounding offset or shoulder b^5 and a ball-shaped terminal or knob b^6 ; but this end may be otherwise finished and the air-vent differently placed when so desired, Figs. 6 and 6^a showing a portion of a filler B', having a smooth portion b^7 , with a screw-threaded portion b^8 , and a cylindrical head b^9 , having an air-vent b^{10} in its rounded end, with a cap B² covering said head and closing said vents. Of this filler the portion b is adapted to be inserted into an ink-well to the required or desired depth, carrying the end b' with it into the ink in said well, which ink, entering through said orifice b^2 into the filler, will rise therein to its outside level, by reason of the external atmospheric pressure, the air within the filler being forced out through the vent b^4 . Said portion b is also adapted to be inserted into the chamber A⁵ through the aperture a^5 , with the portion b^3 screwed home therein, said portion b being housed in said chamber A³, said vent b^4 covered by said aperture a^5 , said shoulder b^5 abutting against the outer extremity of the end a , and said ball-shaped knob b^6 or the head b^9 projecting beyond said end, while the filler containing these elements being thus secured to the penholder or stem will always be with the pen and in convenient position for filling its fountain whenever required, with said knob or head constituting a handle whereby said filler may be readily turned either way, as in screwing or unscrewing, and conveniently handled.

Now to fill the fountain or to replenish with ink the same when empty the fountain or chamber A³ is first opened by removing the tube A⁴ from the end a' , in this instance by unscrewing its end plug a^3 from the aperture a^2 ; second, by removing the filler B from its position in the penholder end, inserting its portion b into an ink-well, and filling it, as described in the first part of the preceding paragraph; third, by closing the vent b^4 , as by the pressure of a finger-tip thereon, and inserting the end b' into said aperture a^2 , atmospheric pressure through the orifice b^2 will prevent the ink from running out; fourth, removing said finger-tip opens said vent and said ink will flow through the orifice b^2 into said fountain, and, fifth, this process continued until the fountain is filled, with the pen tube and filler returned to their respective positions, the pen will again be ready for use.

It will here be remarked that the modicum of ink remaining in the filler after the process of filling and the filler returned to its position in the penholder, said modicum may drain into the hollow of the end knob b^6 , or should any ink drop out through the orifice

b^2 into the chamber A⁵ none can escape therefrom, because the filler completely plugs or closes its aperture a^5 , and the vent b^4 being wholly within said aperture none can escape therethrough.

The pen-holding tube and also the filler are here shown to be screwed into their respective ends of the holder; but they may be otherwise secured in place, as by frictional contact, the ends $a a'$ may be cylindrical instead of tapering, or the general form may be angular instead of cylindrical in contour, all without changing the character of the invention or departing from its spirit.

It is well known that Patent No. 655,517, dated August 7, 1900, was issued to William W. Robbins for a fountain-pen filler; that Patent No. 628,690, dated July 11, 1899, was issued to Joseph H. Burton for a fountain-pen; that Patent No. 370,342, dated September 20, 1887, was issued to Albert J. Kletzker for a fountain-pen, and that Patent No. 448,555, dated March 17, 1891, was issued to Frederick B. Spooner for a medicine-dropper. No claims are therefore made, broadly, to any of the elements herein described; but

What is considered new, and desired to be secured by Letters Patent, is—

1. In a fountain-pen with a holder having a filler-housing chambered with a screw-threaded aperture through the end of said holder opposite the pen, a tubular filler tapering at one end with an opening therein for receiving and discharging ink, and a head at the other end with a screw-threaded portion adjacent to said head and a surrounding offset therebetween, and having an orifice in or near said screw-threaded portion for the discharge and reception of air, said filler to be inserted through said aperture into said chamber with the threads of the two in engagement, substantially as described and for the purpose hereinbefore set forth.

2. The combination in a fountain-pen with the stem or holder, A', having the end, a , and the chamber, A⁵, with the screw-threaded aperture, a^5 , of the filler, B, being a tubular body having the straight portion, b , with the tapering end, b' , having the orifice, b^2 , also the screw-threaded portion, b^3 , with the orifice, b^4 , and the surrounding shoulder, b^5 , with the projecting end knob, b^6 , all arranged and adapted to be secured in position, substantially as described and for the purpose hereinbefore set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ELIPHALET ORAM LYTE.

Witnesses:

J. L. LYTE,
FRED. P. MENTZER.