

(No Model.)

E. MARBLE, Jr.
FOUNTAIN PEN.

No. 369,351.

Patented Sept. 6, 1887.

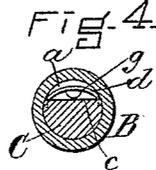
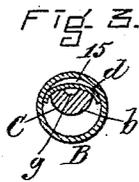
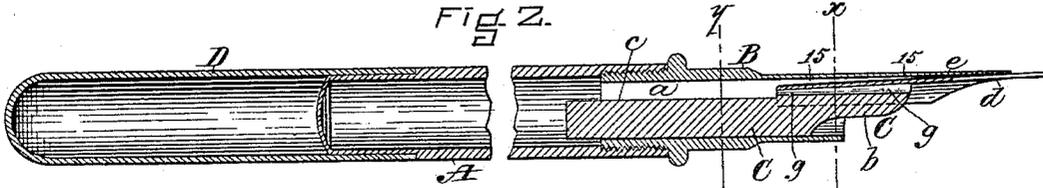
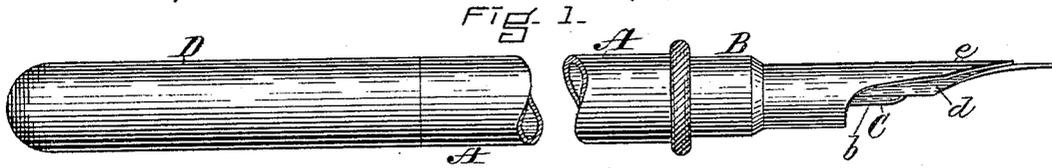


FIG. 5.

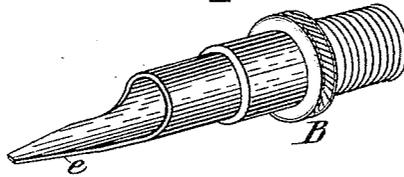


FIG. 6.

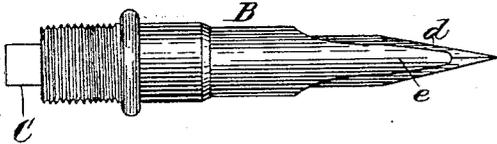


FIG. 7.

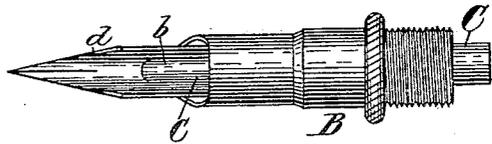
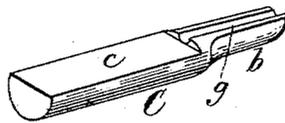


FIG. 8.



WITNESSES.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 369,351, dated September 6, 1887.

Application filed June 10, 1887. Serial No. 240,956. (No model.)

To all whom it may concern:

Be it known that I, EZRA MARBLE, JR., a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Fountain-Pens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in

10 which—

Figure 1 is a side elevation of a fountain-pen constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section through the center of the same. Fig. 3 is a cross-section of the same on the line $x x$ of Fig. 2. Fig. 4 is a cross-section of the same on the line $y y$ of Fig. 2. Fig. 5 is a perspective view of the nozzle or pen section detached and inverted. Fig. 6 is a top view of the same with the pen and pen-holding plug in place therein. Fig. 7 is a bottom view of the same. Fig. 8 is a perspective view of the pen-holding plug.

My invention relates to certain improvements in fountain-pens in which the ink is fed only to the upper surface of the pen, and has for its object to simplify and improve the construction of pens of this description, whereby they are rendered more effective and reliable and the flow or discharge of the ink nicely regulated in proportion to the pressure upon the pen in heavy or fine line writing, thus avoiding the "bleeding" or "dropping" of the ink caused by its flowing too freely, or what is known as "skipping," resulting from an insufficient or irregular flow of the ink to the nibs of the pen while in use.

To this end my invention consists in the combination, with a tubular handle or ink-reservoir, of a nozzle or pen section carrying the pen and provided at its front end with a tapering extension made integral therewith and lying upon the top or upper surface of the pen and extending over the slit of the same, said nozzle having a top feed only, formed by an independent passage or ink-duct extending from the ink-reservoir over and along the upper surface of the pen and between the same and the entire length of the under side of the tapering extension of the nozzle lying thereover, and a pen-holding plug adapted to

fit the bore of the nozzle and forming a seat or support for holding the pen in place within the said nozzle, and having an air-duct, through which air is admitted to the ink-reservoir, as hereinafter more particularly set forth; and my invention furthermore consists in certain combinations of parts and details of construction, as hereinafter set forth and specifically claimed.

In the said drawings, A represents the pen-handle, which is preferably composed of hard rubber or other suitable non-corrosive material, and is made hollow, as usual, to form a reservoir for containing the ink.

B is the nozzle or pen section, also formed of hard rubber, which is screwed into the open threaded end of the handle A and is made tubular for the reception of the pen-holding plug C, the front portion, b , of which is of reduced diameter and extends along the under side of the pen d from its inner end outward a sufficient distance to form a seat and afford a good support for the pen, the pen being held in place within the nozzle by the friction of the inside of the latter and the upper side of the portion b of the plug C.

The nozzle B is provided on the upper side of its front end with a tapering extension, e , made integral therewith and adapted to lie over and upon the upper side of the pen d , which fits and is held firmly between the said nozzle and its extension e and the front portion, b , of the plug C, as seen in Fig. 2, in such manner as to leave a narrow space, 15, between the upper surface of the pen and the entire length of the under side of the extension e of the nozzle lying thereover. The upper side of the pen-holding plug C is flattened from the rear end to the point reached by the inner end or base of the pen d , as seen at c in Figs. 2 and 8, forming a chamber or passage, a , Fig. 2, into which the ink flows from the reservoir in the handle A, and thence enters the inner end of the space 15 at the base or rear end of the pen and flows over and along the top of the same and under the entire length of the extension e to the nibs or point of the pen, which are thus supplied with ink as required.

The upper side of the portion b of the pen-holding plug C is provided with a longitudinal channel, g , forming a vent or air-duct, through

which air is admitted to the ink-reservoir to prevent the formation of a vacuum and allow the ink to flow freely to the nibs of the pen, as desired, the pressure of the air passing inward through this channel *g* forcing the ink back and effectually preventing the ink from entering the same. Consequently no ink whatever is fed to the under side of the pen except what might pass from its upper side through the slit between the nibs when the latter are pressed upon the paper in the act of writing.

As the front portion, *b*, of the pen-holding plug C only requires to extend out sufficiently to hold the pen properly in place and does not form an under or bottom feed, the air-duct is preferably formed along the upper side of this portion *b*; but, if desired, the air-duct may extend through any other part of the pen-holding plug C to afford a proper supply of air to the ink-reservoir.

D is the ordinary cap, which is placed, as usual, on the rear end of the handle A when the pen is being used, and over the nozzle B, to inclose and protect the pen when the latter is not in use.

I am aware that a nozzle having a tapering extension on its upper side adapted to lie over the pen is not new, and that the same has been used in connection with a top and bottom feed, as shown in United States Patent No. 352,564, in which the ink flows along the under surface of the pen to the slit, through which it passes to the upper surface of the same, which is essentially different from my construction.

I am also aware that a tapering extension of the nozzle has been used in connection with a top and bottom feed in a pen having a holder provided with porous material, as shown in United States Patent No. 260,134, said pen having no pen-holding plug inserted within the nozzle to form a seat or support for the pen, which pen-holding plug forms an essential feature of my construction.

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

1. In a fountain-pen, the combination, with

a tubular handle or ink-reservoir, of a nozzle or pen section carrying the pen and provided at its front end with a tapering extension made integral therewith, and lying upon the top or upper surface of the pen and extending over the slit of the same, said nozzle having a top-feed only, formed by an independent passage or ink-duct extending from the ink-reservoir over and along the upper surface of the pen and between the same and the entire length of the under side of the tapering extension of the nozzle lying thereover, and a pen-holding plug adapted to fit the bore of the nozzle and forming a seat or support for holding the pen in place within the said nozzle, and having an air-duct, through which air is admitted to the ink-reservoir, substantially as and for the purpose set forth.

2. In a fountain-pen, the combination, with the tubular nozzle B, having the extension *e*, of the pen-holding plug C, fitted therein and adapted to hold the pen between its front portion, *b*, and the said extension *e*, and having an air channel or duct, *g*, formed in the upper side of the portion *b*, immediately beneath the under surface of the pen, and having its main portion in the rear of the air-duct *g* cut away at *c*, to form an ink chamber or passage, *a*, within the rear portion of the nozzle, said nozzle having an independent ink-duct, formed between the upper side of the pen and the adjacent surface of the nozzle, whereby the ink is fed to the upper surface only of the pen along the entire length of the same beneath the extension *e*, while the front portion of the plug C merely serves to hold and support the pen firmly in place within the nozzle, all constructed to operate substantially in the manner and for the purpose set forth.

Witness my hand this 7th day of June, A. D. 1887.

EZRA MARBLE, JR.

In presence of—

P. E. TESCHEMACHER,
EDWIN F. EDGETT.