No. 799,297. PATENTED SEPT. 12, 1905.

J. F. BETZLER.

FOUNTAIN PEN.

APPLICATION FILED APR. 3, 1905.

Fig. 1.

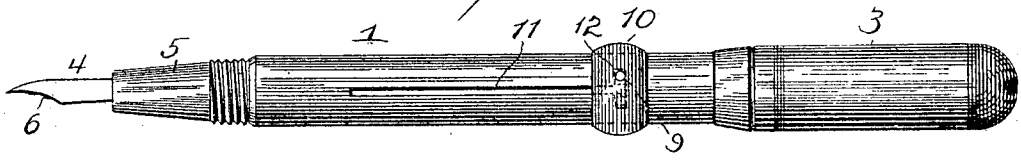

Fig. 2.

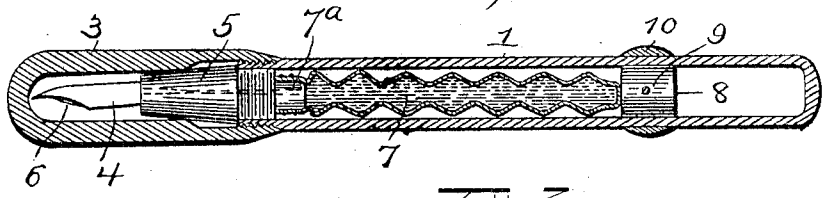

Fig. 3.

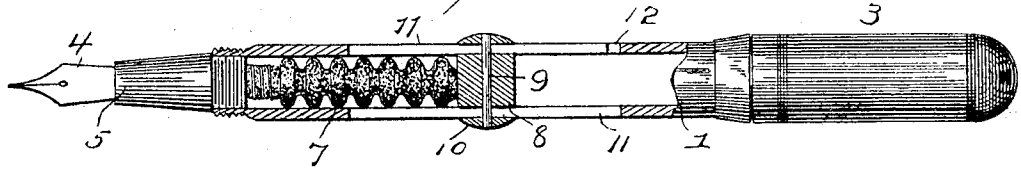

Fig. 4.

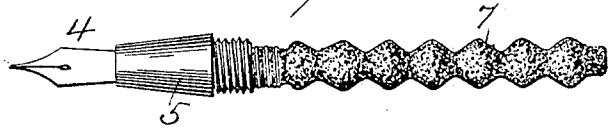

Fig. 5.

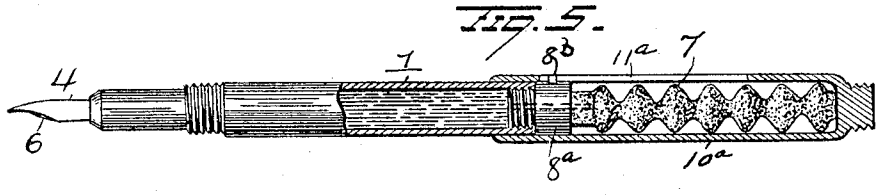

Fig. 6.

WITNESSES

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FOUNTAIN-PEN.

No. 799,257. Specification of Letters Patent. Patented Sept. 12, 1905

Application filed April 3, 1905. Serial No. 253,619.

To all whom it may concern:

Be it known that I, JOSEPH F. BETZLER, a resident of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Fountain-Pens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in fountain-pens, the object of the invention being to provide a pen with an improved annularly-corrugated, flexible, and elastic ink-reservoir or suction device and provide means for contracting the same longitudinally and permitting it to expand to automatically draw in and retain the ink—in other words, provide a self-filling pen in which the ink-reservoir or suction device is constructed to permit its longitudinal contraction and expansion.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, illustrating my improvements. Fig. 2 is a view in longitudinal section, showing the reservoir expanded. Fig. 3 is a similar view showing the reservoir contracted. Fig. 4 is a view of the reservoir detached, and Figs. 5 and 6 are views illustrating a modification.

1 represents the pen-barrel closed at one end and internally and externally screw-threaded at its other end, and 3 is a cap having internal screw-threads to mesh with the external screw-threads on the barrel and inclose the pen-point 4, and said cap can also be placed on the other end of the barrel when the pen is in use.

5 represents the hollow nozzle or plug carrying pen-point 4 and feed-rod 6, and this nozzle is externally screw-threaded to screw into the internal screw-threads of barrel 1. A teat 7^a is provided on the inner end of nozzle 5, to which my improved ink-reservoir and filler 7 is secured, and the latter comprises a soft-rubber tube having annular lateral corrugations, and this tube is closed at its inner end by any approved means. In the barrel 1 a disk or piston 8 is located and secured by pins 9, with a ring 10 located around the barrel. These pins 9 are located in elongated slots 11 in the barrel, which permit the piston to be moved longitudinally thereof to contract the ink-reservoir, and lateral slots 12 are located at one end of the slots 11 to permit the pins 9 to be moved therein and lock the piston against movement.

To fill the pen, piston 8 is moved forward to contract the reservoir, and when the pen is inserted in the ink the piston is drawn back, permitting the reservoir to expand and draw in the ink.

To absolutely prevent any escape of the ink into the cap when the latter is over the pen-point regardless of the position of the pen, I contract the cap internally into conical shape, so that when the cap is screwed into its closed position on the barrel it will compress the conical end of plug or nozzle 5 and absolutely shut the ink-passage and prevent the escape of the ink.

Instead of employing my improved device as an ink-reservoir I might, as shown in Figs. 5 and 6, employ the same merely as a suction device to draw the ink into the pen-barrel, and any approved mechanism may be used to contract the suction device—such, for instance, as a slotted casing 10^a, having the filler 7 therein and operated thereby, said filler being attached at its forward end to a cap 8^a, having a duct communicating with the barrel. The casing 10^a is movable over the barrel 1 and cap 8^a and is guided by a pin 8^b, secured to the cap and entering slot 11^a in the casing 10^a.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a fountain-pen, the combination of a barrel, a corrugated, longitudinally-collapsible filling-tube, said barrel and tube permanently assembled, a nozzle for a pen-nib and feeding means, and an operating device for the filling-tube embracing and movable on the barrel and connected with the collapsible tube for contracting and expanding the same longitudinally.

2. In a fountain-pen, the combination with a barrel, of a casing movable on the barrel, a collapsible filling-tube within said casing and operated thereby, the forward end of said filling-tube communicating with the barrel.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH F. BETZLER.

Witnesses:
J. I. BACHTEL,
H. J. BACHTEL.