(No Model.)

G. H. SACKETT.

FOUNTAIN PEN.

No. 353,162. Patented Nov. 23, 1886.

Fig. 1.

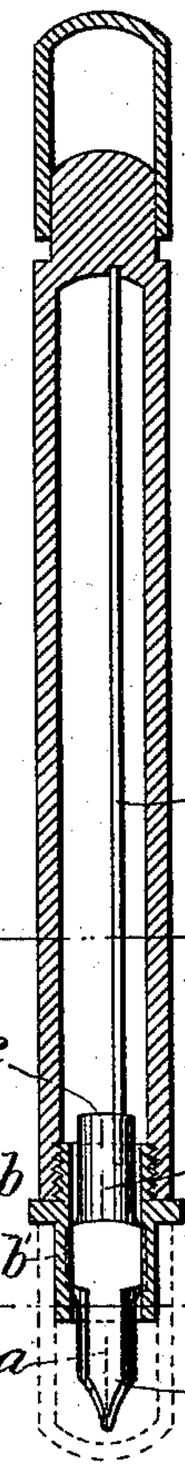

Fig. 4.

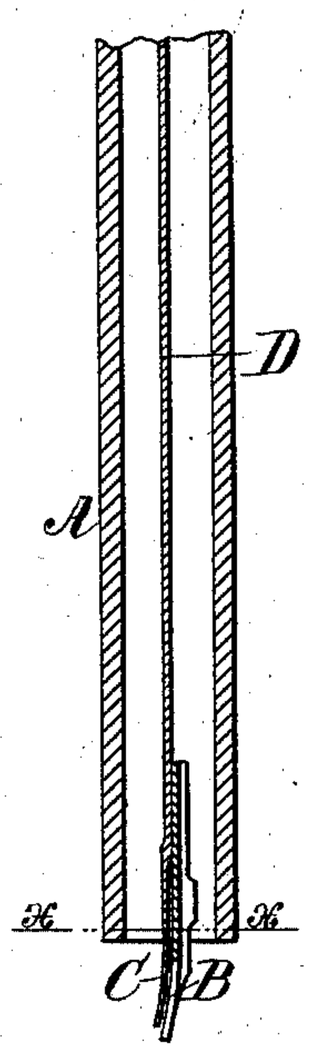

Fig. 3.

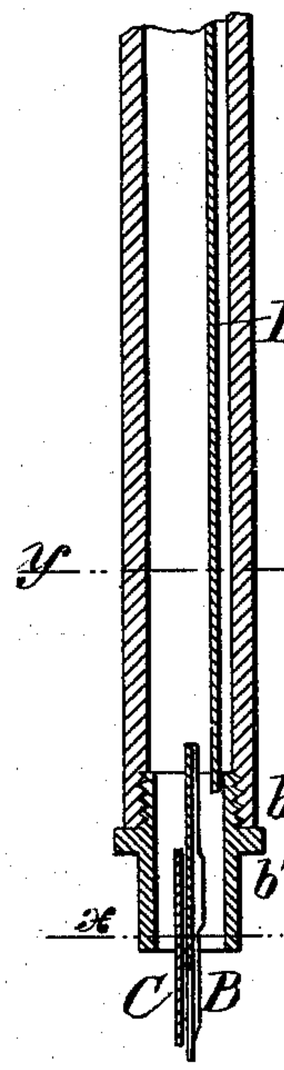

Fig. 8.

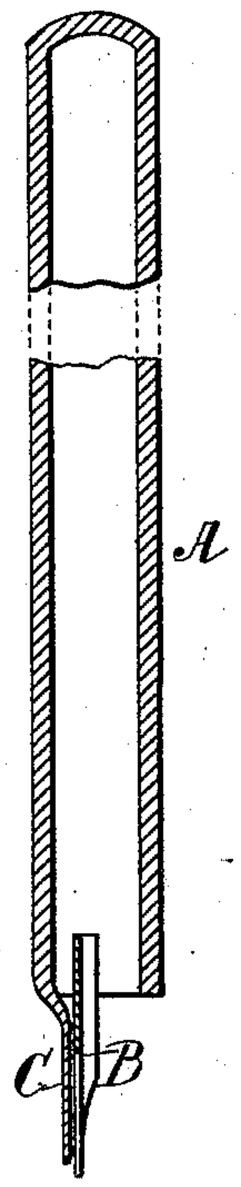

Fig. 6.

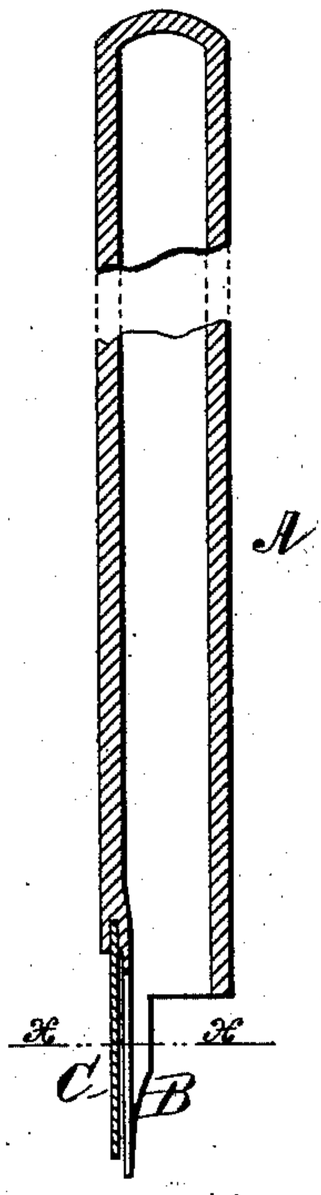

Fig. 5.

Fig. 9.

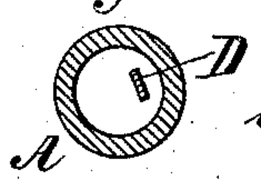

Fig. 2.

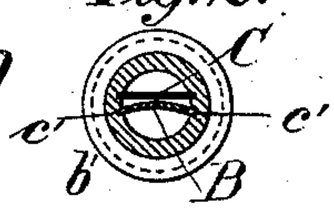

Fig. 7.

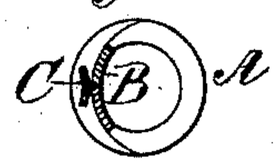

Fig. 10.

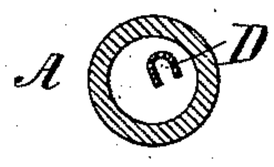

Fig. 12.

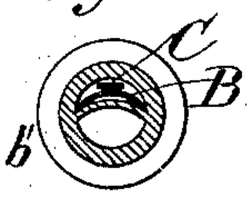

Fig. 11.

WITNESSES:
Edw. F. Tourtellotte.
Charles A. Herbert.

INVENTOR
George H Sackett
BY
James A Whitney
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE H. SACKETT, OF BROOKLYN, NEW YORK.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 353,162, dated November 23, 1886.

Application filed April 23, 1882. Serial No. 92,621. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. SACKETT, of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Fountain-Pens, of which the following is a specification.

This invention comprises certain novel means of insuring the downward flow of ink within the reservoir or tubular holder of a fountain-pen; also a novel means of insuring the free and regular transmission of the ink from the lower end of the ink-reservoir to the point of the pen. By my said invention I am enabled to provide an effective fountain-pen of very simple construction and relatively economical in cost of manufacture.

Figure 1 is a longitudinal sectional view of a writing implement constructed according to my said invention. Fig. 2 is a transverse sectional view taken in the line *y y* of Fig. 1. Fig. 3 is a longitudinal sectional view taken in a plane at right angles to that of Fig. 1. Fig. 4 is a similar view showing a modification of my said invention, and Fig. 5 is a transverse sectional view taken in the line *x x* of Fig. 4. Fig. 6 is a longitudinal sectional view taken in a plane at right angles to that of Fig. 1, but representing another modification of my said invention. Fig. 7 is a transverse sectional view taken in the line *x x* of Fig. 6. Fig. 8 is a longitudinal sectional view taken in a plane at right angles to Fig. 1, but representing a further modification of my said invention. Fig. 9 is a transverse sectional view taken in the line *y y* of Fig. 3. Figs. 10 and 11 are similar views showing modification of the device illustrated in Figs. 3 and 9. Fig. 12 is a similar view illustrating a further modification of my said invention.

A is the ink-reservoir or tubular holder, closed at its upper and open at its lower end. In or to the latter is affixed the pen B in such a manner that the slit *a* of said pen shall be in close proximity to the mouth of the reservoir, so that the ink from the latter may pass to the said slit, and so that the latter, in conjunction with the lip, hereinafter presently described, may insure the passage of the ink to the point of the pen. This may be very conveniently done by thrusting the inner end, *c*, of the pen into the lower end of the holder, with its lateral edges in longitudinal grooves or recesses formed for their reception in the adjacent sides of the reservoir, as shown in Figs. 1, 2, 3, and 5; or the pen may be formed in one piece with or firmly attached to the reservoir, as indicated in Figs. 6 and 7. The slit *a* is designed, in connection with the lip C, to insure the free and regular transfer of the ink from the open or lower end of said reservoir to the point of the pen. The lip or tongue C is attached over the back of the pen in such a manner as to provide a thin space between said pen and lip transverse to and in communication with the slit *a* of the pen, thereby providing a channel made up of said slit and said thin space for conducting the ink to the point of the pen, said channel being in whole or in part, so to speak, T-shaped in its cross-section, while its opposing surfaces, by attraction of adhesion, insure the flow of the ink through said channel to the point of the pen as the ink is drained from the latter in the operation of writing. This lip or tongue may be formed in any appropriate manner. Thus, for example, it may be formed upon or attached to the lower end of the feeding-stem D, hereinafter more fully described, as shown in Fig. 4; or it may consist of a slip of gold, rubber, or other suitable material inserted in same manner as the pen and parallel therewith, as shown in Fig. 2; or it may be inserted in a suitable step or socket formed externally in the holder, as shown in Fig. 6; or it may be formed by a prolongation of the holder itself, as shown in Fig. 8.

The feeding-stem D is a device designed to insure the regular descent of the ink within the reservoir A when the latter is of such diameter that under ordinary conditions the ink would be maintained in the upper part of said reservoir by atmospheric pressure from below, and thus interfere with the operation of the pen by failing to regularly supply the same with ink, the said stem being so constructed in itself or so arranged in relation to the walls of the reservoir as to provide what may be termed an "internal capillary channel," through which a small current of ink may flow downward, leaving the air in the surrounding space free to move upward, thereby insuring, more especially when the holder is of very small diameter, the automatic downward feeding of the ink to the upper portion of the pen, whence, by means hereinbefore explained, it is transferred

to the point thereof. The said stem may therefore consist of a simple flat strip of metal or other suitable material placed close to but not in actual contact with one of the sides of the interior of the reservoir, as indicated in Figs. 1, 3, and 9, or of a single strip grooved or U-shaped in its cross-section, as shown in Fig. 10; or its equivalent may be provided by longitudinally grooving the internal surface of the reservoir, as shown in Fig. 11 and indicated by the same reference-letter D, the walls or surfaces of the said grooves serving the same purpose, because of their adhesive attraction, in substantially the same way as does the stem itself when applied as hereinbefore explained.

It should be kept in mind that the feeding-stem facilitates the operation of filling the reservoir as well as the feeding of the ink to the pen.

When desired, the lip C may be arranged at the under instead of the upper side of the pen, or it may be duplicated, one lip being placed above and one below the pen to still further increase the feeding capacity. Furthermore, the said lip C may, when preferred, be made more or less flexible, so as to yield or bend with the movement of the pen in the operation of writing.

It is to be kept in mind that, as shown, for example, in Figs. 1, 6, and 8, the whole reservoir is closed at the upper end and open at its lower end, air being admitted through the opening at the lower end to supply the place of the ink withdrawn from the reservoir in the act or operation of writing.

When desired, the opening at the lower end of the holder may be in duplicate, as shown in Fig. 12—in other words, it may be divided into two compartments, into one of which the pen may be inserted and secured, as shown in said Fig. 12. The holder or reservoir, when desired, may be made in two parts, *f* and *f''*, tightly screwed together, as shown in Figs. 1 and 3, and separable for convenience in filling or cleaning the same.

I do not claim a cluster of minute and parallel bristles or fine wires arranged to provide capillary passages between them independent of the slit of the pen for transferring ink from the reservoir to the pen, such construction being different from and inferior to that embodied in my said invention. Further, I do not claim a writing implement composed of an air-tube and two ordinary writing-pens superposed one upon the other to provide a crescent shaped passage between them and held in place by a plug, which also serves to close the adjacent end of the ink-reservoir against the admission of air, such implement being radically different from my invention in principle of operation; but

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

1. In a fountain-pen, the combination of the following elements, to wit: an ink-reservoir closed air-tight at its top and open and internally unobstructed at the bottom for the passage of air and ink, a slitted pen attached to the permanently-open bottom of the reservoir, and a lip or tongue the inner surface of which is applied parallel with the pen to form, conjointly with the surface and the slit of the pen, a channel for conducting the ink directly from the open lower end of the reservoir to the point of the pen, all substantially as and for the purpose herein set forth.

2. In a fountain-pen, the combination of the following elements, to wit: an ink-reservoir closed air-tight at its top and open and internally unobstructed at the bottom for the passage of air and ink, a slitted pen attached to the permanently-open bottom of the reservoir, and a lip or tongue the inner surface of which is applied parallel with the pen to form, conjointly with the surface and the slit of the pen, a channel for conducting the ink directly from the open lower end of the reservoir to the point of the pen, and a feeding-stem located within the reservoir and with its lower end connecting with the channel aforesaid, and with its upper end extended to or near the closed upper end of the reservoir to insure the descent of ink to said channel, all substantially as and for the purpose herein set forth.

3. In a fountain pen, the combination of a holder or reservoir closed air-tight at the top and open and internally unobstructed at the bottom, a slitted pen, and a feeding-stem placed within said reservoir with its upper end extended to or near said upper end of said reservoir and provided at its lower end with the lip C, placed over and adjacent to the back and slit of the pen, all substantially as and for the purpose herein set forth.

GEORGE H. SACKETT.

Witnesses:
RUDOLF H. RJELLMAN,
JNO. CAMPBELL DUNNE.