H. BERLIE & F. X. LAMBOLEY.
FOUNTAIN-PEN.

No. 190,266. Patented May 1, 1877.

FIG. 1.

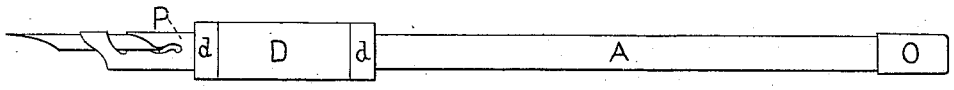


FIG. 2.

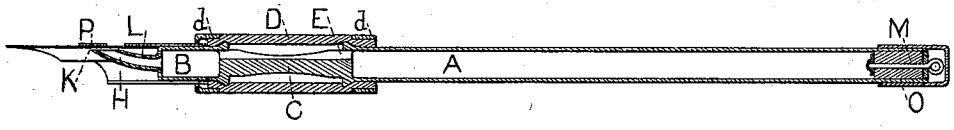


FIG. 3.

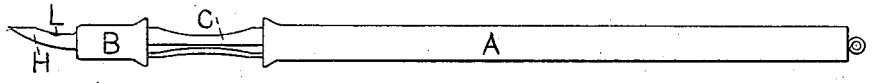


FIG. 4.

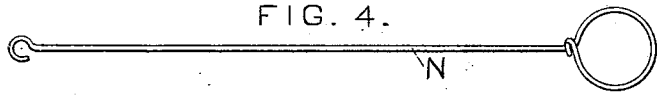


FIG. 5.

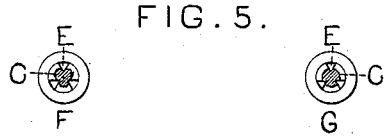
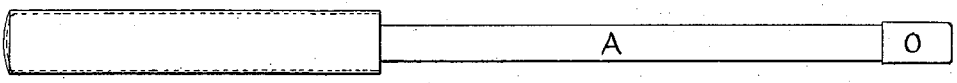


FIG. 6.



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IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **190,266**, dated May 1, 1877; application filed April 13, 1877.

To all whom it may concern:

Be it known that we, HENRI BERLIE and FRANÇOIS X. LAMBOLEY, of the city, county, and State of New York, have invented a new and useful Improvement in Fountain-Pen Holders, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents an outline of the pen-holder complete, with a pen attached. Fig. 2 is a longitudinal section of the same. Figs. 3 and 4 are views of the parts in plan. Fig. 5 is a transverse section of the holder in the center of the elastic chamber or cylinder. Fig. 6 is an outline of the pen-holder, with a cap to cover the pen, for carrying it in the pocket.

This invention pertains to that class of devices used for holding pens for writing and at the same time supplying ink to the pen; and the invention consists in the combination, with a pen-holder having a fountain attached for the ink, of an elastic holder and a supplemental chamber, having a tube for carrying the ink to the pen, whereby the pressure of the fingers on the elastic holder will cause a flow of the ink from the supplemental chamber to the pen, as hereinafter set forth.

At A is represented the stem of the holder, which is made hollow, to serve as a reservoir for the ink. This hollow stem is connected with a second chamber, as at B, by means of a solid rod of metal, as at C, one end of which is inserted into the end of the hollow stem A, and the other end into the end of the chamber B, and fastened therein by solder or in other suitable manner; or all three of said parts may be cast in one piece, or, if made of glass, may be blown from a single tube.

The part C is made smaller at its center than it is at its ends, to form a chamber between it and an elastic cylinder, as at D, that surrounds it. Said cylinder may be formed of rubber or leather or cloth, if properly coated, to make it water-proof, and it is formed into a tube, and its ends are drawn over the ends of the stem A and the chamber B, which are slightly enlarged, and inclined to receive corresponding bands, as at *d*, to compress the ends of the elastic tube tightly around the end of the stem and the chamber B, and thereby make an elastic chamber sufficiently tight to hold the ink.

To permit the ink to flow from the stem A to the chamber B, a groove, as at E, is formed in the side of the part C; or holes may be formed at its two ends to allow the ink to flow from the reservoir in the stem A to the elastic chamber, and thence out into the chamber B. More than one of such grooves may be formed in the part C, as shown at Fig. 5, where the V-shaped outlines indicate the grooves, the one at F showing a section of the part C as a triangle, and that at G as a circle, as will be hereinafter explained.

To conduct the ink from the chamber B to the pen a small tube, as at H, is attached to the end of the chamber B, and said tube is curved in such a manner as to bring its open end nearly out against the inner face of the pen, as at K, Fig. 2, but in such close proximity to the pen that the ink will not flow out until a slight pressure is produced on the ink by pressing upon the elastic chamber or tube that surrounds the part C. When said pressure is released upon the chamber the ink will to a certain extent be drawn up or sucked back from the pen by the reaction of the elastic tube D, and it would all be drawn back to such an extent as to interfere greatly with its use until the ink had time to run out to the point of the pen. To prevent such an objection, a hole, as at L, is formed in the side of the tube H, between its open end and the chamber B, of sufficient size to permit air enough to enter to partly divide the stream of the ink in the tube whenever any reaction may be produced on it by the reaction of the elastic tube D. This hole also permits an influx of air into the chamber B, and also, through the groove or grooves in the part C, into the chamber in the stem A, to prevent a vacuum in the said chambers.

The chamber or reservoir in the stem A is provided with a plunger, as at M, which serves as a stopper, to prevent the ink from escaping, and it also serves as a piston to draw the ink from an inkstand or bottle into the reservoir, by attaching the hooked wire N (shown at Fig. 4) to the eye of the plunger,

and shoving it down to the bottom of the reservoir; then inserting the tube H into the ink and drawing up the plunger to the top, as at Fig. 2, the reservoir will be filled, when the hooked wire N may be disconnected and the cap, as at O, placed on the stem, to cover the plunger. Said cap may also contain an ink-eraser, as of rubber, or be made in any other convenient form.

The pen K is inserted into a thimble of the ordinary kind, as shown at P, and its open end is slipped over the chamber B in the same manner as over ordinary holders, so that any form of pen may be used in such holder, as desired.

The triangular portion of the part C is intended to serve as a gage, to prevent the pressure of the thumb and fingers upon the elastic chamber from entirely closing the passages between the reservoir and the chamber B; but it may be made round when a stiffer tube is used for the elastic chamber.

It is evident that various changes may be made in the method of combining the parts without departing from the nature of our invention; and

We therefore claim—

1. The combination of the elastic chamber, the reservoir A, and the supplemental chamber, having a tube for carrying the ink to the pen, substantially as described.

2. The combination, with the reservoir A, of the plunger M, the rod C, having the groove E, the elastic tube D, the supplemental chamber B, and the tube H, having the vent-opening L, substantially as described.

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Attest:
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