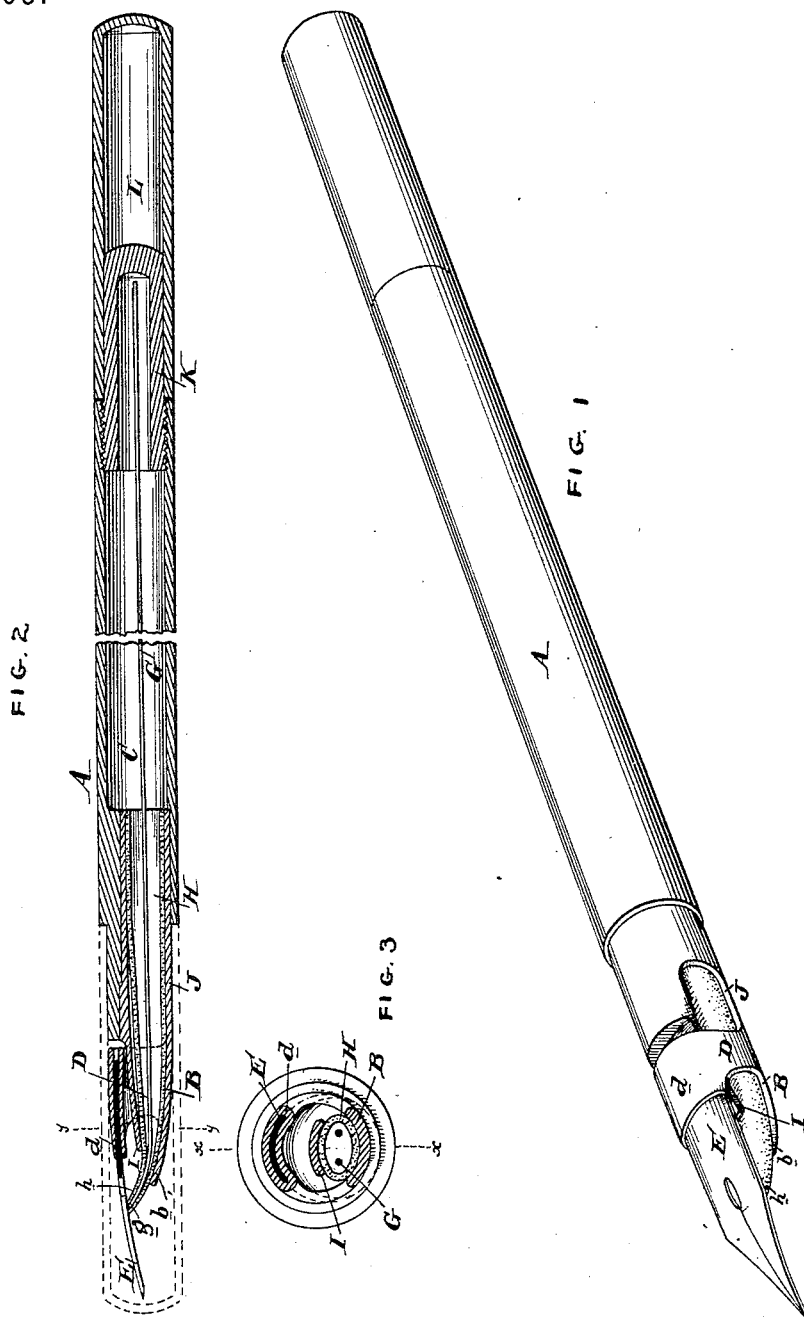


(No Model.)

W. B. PURVIS.
FOUNTAIN PEN.

No. 419,065.

Patented Jan. 7, 1890.



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UNITED STATES PATENT OFFICE.

WILLIAM B. PURVIS, OF PHILADELPHIA, PENNSYLVANIA.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 419,065, dated January 7, 1890.

Application filed September 13, 1888. Serial No. 285,277. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. PURVIS, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Fountain-Pens, of which the following is a specification.

My invention has reference to fountain-pens; and it consists of certain improvements, all of which are fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

The object of my invention is to provide a simple, durable, and inexpensive construction of fountain-pen adapted to general use and which may be carried in the pocket. The construction is such that the ordinary action of writing causes, through the mediation of the ink-feeding devices, the ink to flow into the pen from the reservoir in volume commensurate with the duty required of the pen.

In carrying out my invention I form the holder into an ink well or reservoir in any of the well-known ways and support the pen flexibly over an outlet from said reservoir, and also provide an elastic ink-feeding tube between the reservoir and pen with a pressure-point carried by the holder to compress said elastic tube with each downward stroke of the pen, so as to expel a small quantity of ink from the reservoir-outlet in a positive manner.

My improvement will be better understood by an examination of the drawings, in which—

Figure 1 is a perspective view of my improved pen-holder. Fig. 2 is a longitudinal section of same on line *xx* of Fig. 3; and Fig. 3 is a cross-section of same on line *yy* of Fig. 2.

A is the holder proper and is made hollow, forming a reservoir C. The lower end of this holder terminates in two arms B and I, the former of which is the longer, preferably turned up, as at *b*, and made flexible at J, near the holder. Arranged between the parts B and I is an elastic tube H, connected at its upper end with the reservoir so as to receive ink, and having its other end curved upward toward the pen and terminating in a small orifice to supply ink to the pen. The elastic part or arm B has two lateral parts D, which

support the pen-socket *d*, and which, with said socket, encircle the tube H and pressure-point I.

E is the pen and normally rests in contact with the orifice in the curved end *h* of the tube H.

G is a wire extending through the tube H, and is preferably bent up or curved at its end, as at *g*, corresponding to the curve in the end *h* of the rubber tube. This insures the orifice of the tube from becoming closed, induces more ready flow of ink, and provides means to easily clean the tube-orifice in case of it becoming clogged. Aside from these objects, the curved wire or metal piece G insures the rubber tube end retaining its curved shape and proper presentation to the pen.

It is evident that if desired the end *h* of the tube H may be of metal.

While the wire G is most advantageous, it may be dispensed with, if desired.

The upper end of the reservoir C is provided with a screw-plug K, which when removed furnishes an orifice for filling the reservoir with ink. When the pen is in use the cap L is fitted over the plug end K, and when not in use the cap is placed over the pen, as indicated in dotted lines, Fig. 2.

In operation the ordinary action of writing brings pressure on the under surface of the pen, and as the pen E and its connections *d*, *D*, and *B* cannot move downward, owing to the obstruction of the paper, the handle A causes the point I to be depressed, pressing upon the upper part of the rubber tube H. Simultaneously with this operation the pen, by its own elasticity, removes the pressure from the orifice of the curved end *h* of the tube H. By these combined actions the ink is caused to flow out of the orifice to the pen, and with a speed and volume commensurate with the requirement and duty of the pen. If from any cause too much ink should pass through the orifice, the action of the suction within the reservoir, assisted by capillary attraction, would cause the excess of ink to immediately run back into the tube H. In practice this instrument is found most admirable for the purpose, and has no tendency

to blot or otherwise disfigure the writing by inequalities of the flow of ink or incapacity for proper regulation.

It is evident that the handle may be made to receive ink at either end, and that the various parts may be modified without in the least departing from the spirit of the invention.

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

1. In a reservoir or fountain pen, the combination of a holder having a reservoir contained within it and provided with a flexible support or socket for the pen, an elastic tube connecting with the reservoir and leading to the pen, and a pressure-point carried by the holder to press upon the elastic tube to express the ink.

2. In a reservoir or fountain pen, an elastic tube for supplying ink from the reservoir to the pen, in combination with a pressure-point operated by the pen-holder to compress the tube intermittently during writing.

3. In a reservoir or fountain pen, the combination of a holder having a reservoir, two downwardly-extending parts or arms, one of which is rigid and constitutes a pressure-point, and the other of which is flexible, and an elastic tube arranged between said parts for conveying and regulating the supply of ink from the reservoir to the pen.

4. In a reservoir or fountain pen, the combination of a holder having a reservoir, two downwardly-extending parts or arms, one of which is rigid and constitutes a pressure-point, and the other of which is flexible, a pen supported by the flexible part or arm, an elastic tube arranged between said parts and having its end turned up against the under surface of the pen for conveying and regulating the supply of ink from the reservoir to the pen.

5. In a reservoir or fountain pen, the combination of a holder having a reservoir, two downwardly-extending parts or arms, one of which is rigid and constitutes a pressure-

point, the other of which is flexible, a pen supported by the flexible part or arm, an elastic tube arranged between said parts, having its end turned up against the under surface of the pen for conveying and regulating the supply of ink from the reservoir to the pen, and a wire extending through said elastic tube.

6. A holder having a reservoir and a pen-socket, in combination with a flexible tube leading from the reservoir to the under side of the pen, and a support for said tube.

7. In a pen, the combination of a pen-socket and pen flexibly supported by the holder, an elastic tube for conveying ink to the pen, and a pressure-point movable with respect to the pen-socket to compress the tube during the act of writing.

8. The combination of the holder A, containing a reservoir C, the pressure-point I, the flexible arm B, having the pen-socket *d*, the pen E, and the elastic tube H, connecting the reservoir with the under surface of the pen and arranged between the point I and arm B.

9. The combination of the holder A, containing a reservoir C, the pressure-point I, the flexible arm B, having the pen-socket *d*, the pen E, and the elastic tube H, having the curved end *h* and connecting the reservoir with the under surface of the pen and arranged between the point I and arm B, and wire G through said tube.

10. The combination of the holder A, containing a reservoir C, the pressure-point I, the flexible arm B, having the pen-socket *d* and curved end *b* for supporting the tube, the pen E, and the elastic curved tube H, connecting the reservoir with the under surface of the pen and arranged between the point I and arm B.

In testimony of which invention I hereunto set my hand.

WILLIAM B. PURVIS.

Witnesses:

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