L. B. SOLEMINK.

FOUNTAIN DRAFTING PEN.

APPLICATION FILED JULY 13, 1916.

1,242,062.

Patented Oct. 2, 1917.

Fig. 1.

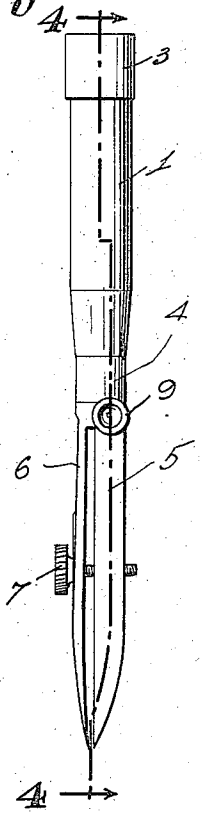



Fig. 2.

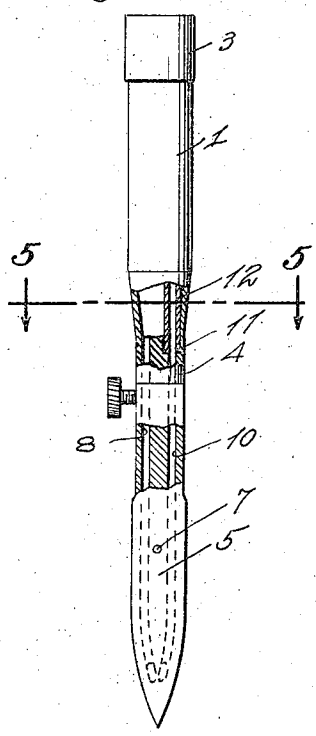



Fig. 3.

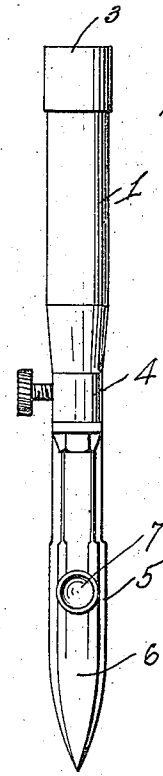



Fig. 4.

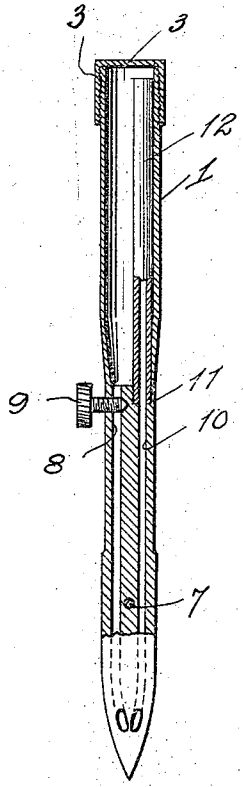
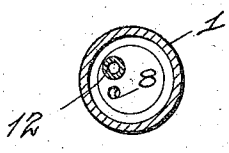



Fig. 5.




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# UNITED STATES PATENT OFFICE.

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## FOUNTAIN DRAFTING-PEN.

1,242,062. Specification of Letters Patent. Patented Oct. 2, 1917.

Application filed July 13, 1916. Serial No. 109,086.

*To all whom it may concern:*

Be it known that I, LLOYD B. SOLEMINK, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Fountain Drafting-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.

This invention relates to new and useful improvements in fountain drafting pens and the principal object of the invention is to provide a pen of the barometric type which will automatically maintain a certain quantity of ink at the point so long as the reservoir of the pen remains filled.

Another object of the invention is to provide a pen which combines the advantages of the ordinary type of ruling pen with the advantages of a fountain pen.

A still further object of the invention is to provide a valve for controlling the feed of ink from the reservoir into the point of the pen.

With these and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawing, in which:—

Figure 1 is a side view of a pen constructed in accordance with this invention.

Fig. 2 is a view similar to Fig. 1 taken at right angles thereto, and partly in section to further illustrate the same.

Fig. 3 is a side elevation of the fountain pen as made in accordance with this invention.

Fig. 4 is a longitudinal sectional view through the pen and taken on the line 4—4 of Fig. 1, and

Fig. 5 is a sectional view on line 5—5 of Fig. 2.

Referring to the drawing the numeral 1 designates the ink reservoir provided at its upper end with external screw threads 2 on which the cap 3 fits. The lower end of said reservoir is provided with the closure 4 on which the tines 5 and 6 of the pen are mounted. The tine 6 is adapted to tend to spring outwardly and is held in various adjusted positions with relation to the tine 5 by means of an adjusting screw 7. The point of the pen is formed in the usual manner as clearly illustrated in the drawing. A suitable ink duct 8 extends through the tine 5 of the point of the pen and leads downwardly as shown in the drawing to a point slightly above the lower terminal of the pen point and the upper end of this ink duct communicates with the reservoir 1. A suitable valve 9 is provided in the tine 5 and intersects the upper end of the ink duct 8 in order that the flow of ink through said duct can be readily controlled. Extending through the tine 5 in parallel relation to the duct 8 is the air passage 10 the lower end of which terminates in a plane with the lower end of the ink duct while the upper end of said passage is provided with an enlarged threaded bore 11 into which a pipe 12 is threaded. This pipe 12 extends upwardly within the reservoir 1 to a point slightly below the under side of the cap 3 and thus establishes communication from the air passage 10 with the air space above the ink within the reservoir.

It will be apparent from the foregoing that in use the reservoir is filled to the proper height and the cap 3 is then threaded thereon so as to form an air tight closure for the upper end of said reservoir, the valve 9 first having been closed to prevent the passage of ink into the ink duct. When it is desired to use the pen the valve 9 is opened and it will be evident that the air entering the air passage 10 at its lower end will pass upwardly through the pipe 12 and into the space between the upper end of the reservoir and the ink lever thereby allowing the ink when the valve 9 is open to flow downwardly through the ink duct 8 until the point of the pen is filled to a plane on a level with the upper end of the ink outlet opening at the lower terminal of the passage at which time the ink will cover the air inlet passage and thus prevent further admission of air into the reservoir which will simultaneously stop the flow of ink into the point of the pen. As the ink is used from the pen point and the level in said point falls below the upper side of the air inlet opening it will be apparent that more air will be admitted to the reservoir and thus the ink will again flow down through the ink duct until the level is again established at the pen point. In this way it will be seen that as long as the reservoir remains filled and the valve 9 open the level of the ink at the pen point will remain substantially constant thus saving considerable time in the making

of drawings which is consumed in the applying of ink to the pen.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the appended claims.

What is claimed is:—

1. A fountain drafting pen comprising an ink reservoir, a pair of tines extending from one end of said reservoir, one of said tines being provided with an ink duct having its upper end communicating with the reservoir the lower end of said duct opening toward the inner face of the tine adjacent its lower end, the said tine having an air passage extending therethrough in parallel relation to the ink duct the lower end of said passage opening in a plane with the opening of the ink duct and a pipe at the upper end of the passage extending through the reservoir to a point near the upper end thereof.

2. A fountain drafting pen comprising an ink reservoir, a closure at one end of the reservoir, a pair of tines connected to and extending from said closure, one of said tines being provided with an ink duct having its upper end communicating with the reservoir, said tine also having an air passage extending therethrough in spaced parallel relation to the ink duct and the lower end of said air passage and ink duct terminating flush and opening out toward the inner face of the tine adjacent its lower end, the upper end of said air passage provided with a recess the walls of which are provided with screwthreads, a pipe removably secured in the recess at the upper end of the passage and extending through the reservoir to a point near the upper end thereof, a cap removably mounted on the upper end of said reservoir forming an air tight closure therefor, as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

LLOYD B. SOLEMINK.

Witnesses:
IDALENE E. SOLEMINK,
EARL B. MCCORMICK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."