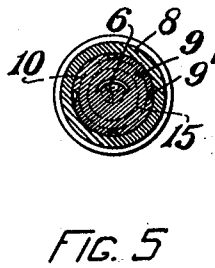
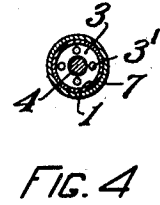
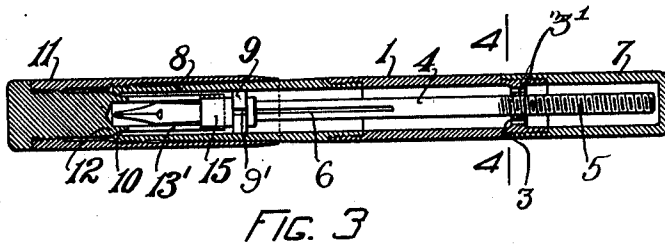
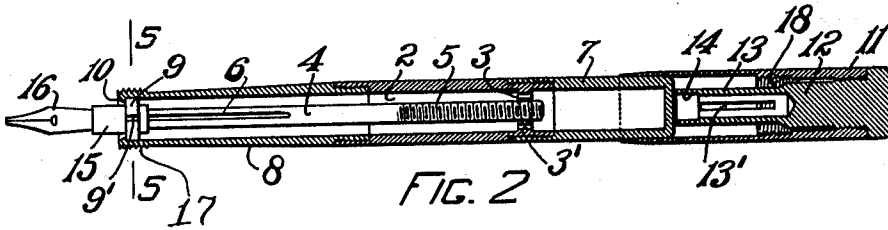
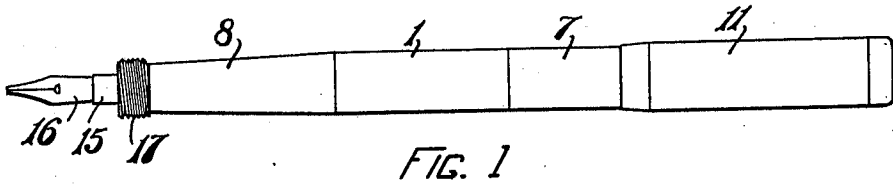


M. W. MOORE.
 FOUNTAIN PEN.
 APPLICATION FILED FEB. 7, 1910.

1,031,282.

Patented July 2, 1912.



WITNESSES
A. T. Palmer
L. D. Goodwin

INVENTOR
 MORRIS W. MOORE
 BY
W. S. Spang

ATTY.

UNITED STATES PATENT OFFICE.

MORRIS W. MOORE, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO SAMUEL WARD COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

FOUNTAIN-PEN.

1,031,282.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed February 7, 1910. Serial No. 542,409.

To all whom it may concern:

Be it known that I, MORRIS W. MOORE, a citizen of the United States, residing at Somerville, county of Middlesex, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to fountain pens and particularly to that class of fountain pens in which the tip end is open for filling and in which the pen is submerged in the barrel when not in use. In these pens there has been a constant effort to produce structures in which the operation of the parts in moving the pen to and from the writing position would be accomplished without the liability to spatter or discharge ink from the open end of the pen. It is also a desideratum that the pen be made to move smoothly and evenly throughout its course and that the parts be so formed and arranged that the ink and air will readily change positions relative to the plug on the pen bar during filling and yet not be liable to flood or blot when in the writing position. These, with various other features in the line of improved and simplified structure and operation, have been my aim in the production of my present invention which I will proceed to set forth more fully in the specification which follows.

I have shown in the drawings which form a part of the said specification an illustrative embodiment thereof in the form of an improvement on my prior Patent No. 939,057, granted November 2, 1909.

In the specification and drawings like letters of reference indicate corresponding parts throughout and in the drawings, Figure 1 is a view of my pen in writing position, Fig. 2 is a central longitudinal section with the pen in same position, Fig. 3 is a similar sectional view of the pen in retracted and closed condition, Fig. 4 is a sectional detail on the line 4-4, Fig. 3, and Fig. 5 is a section on the line 5-5, Fig. 2.

1 is a pen barrel having a uniform tubular bore 2 throughout. This pen barrel may be made in any suitable sections, or otherwise constructed, in order to secure proper facility for turning and assembling the parts, and is preferably permanently closed at one end, while the opposite end, which is open, is formed with a small shoulder or abutment

10 which projects slightly within the bore of the barrel.

Near the rear end of the pen is located a threaded rim formed inside the barrel which is also perforated at 3' to permit the free passage of ink from one side to the other. Into this passage is screwed the threaded end 5 of a pen bar 4 which has a suitable ink duct 6 formed along the outer end thereof.

9 is a cylindrical valve having a projection 15 which is somewhat smaller than the free opening within the abutment 10. On the surface of the valve 9 are formed longitudinal ink passages 9' which permit the passage of ink between the surface of the valve and the walls of the uniform bore of the barrel, whenever the valve is removed from contact with the abutment 10.

11 is a cap into which is screwed a plug 12 formed on its inner end with a sleeve 13 suitably slotted at 13' and terminating at its outer end in a shoulder or recessed portion 14 adapted to fit over the portion 15 at the end of the valve, while preventing the end of the sleeve 13 from coming down wholly into contact with the piston 9.

17 is an external screw thread on the open end of the barrel and 18 is an internal screw thread within the cap 11 adapted to engage with the screw thread 17.

16 is a suitable pen point connected with the pen bar and valve in any suitable manner.

The operation of the pen is as follows: When it is desired to close the pen from the writing position, shown in Fig. 1, the cap is removed from the rear end 7 of the barrel 1 and slipped over the pen end of the barrel, in which position it is to be noted that the internal sleeve portion 13 passes over the pen point 16 and finally lodges with the shouldered portion in frictional contact with the portion 15 of the valve 9. As the cap is rotated the pen bar 4 is turned and the threaded portion 15 screwed back through the engaging threads of the portion 3. If it be simply desired to close the pen, the screwing of the cap is continued until the threads 18 engage the thread 17, locking the cap and barrel together. If, however, it be desired to fill the pen, the screwing of the cap is checked midway in its course and the cap removed. In this position it will be found that the valve 9 has been backed away

from the abutment 10, thus uncovering the ink passages 9' and leaving a space above the valve 9 into which ink may be poured in the filling. The ink thus poured in will quickly pass through the passages 9' into the chamber below. During this operation the ink and air change places rapidly and without obstruction. After the pen has been filled the cap may be again put on with the part 14 in frictional contact with the part 15 and the cap screwed home on the open end of the barrel or the pen may be again returned to the position shown in Figs. 1 and 2. When in this position last mentioned the valve 9 is brought snugly against the abutment 10 so that the abutment covers the ends of the passages 9' thus sealing them against the escape of ink. The only way, therefore, in which ink can pass from the chamber of the pen is through the usual feed duct 6 to the pen point.

Various modifications in the construction and modification of my device may obviously be made without departing from the spirit of my invention if within the spirit of the appended claims.

What I, therefore, claim and desire to secure by Letters Patent is:—

1. A submerging fountain pen comprising a barrel having a bore, an inwardly projecting abutment upon the interior of the forward end of said bore, a pen bar slidably mounted within said barrel, an enlargement upon said bar fitting closely within said bore and having a passage extending therethrough to feed the pen and a passage

through said enlarged portion and located so as to be closed by said abutment when said enlarged portion is moved thereagainst.

2. A submerging fountain pen comprising a barrel having a bore, an inwardly projecting abutment upon the interior of the forward end of said bore, a pen bar slidably mounted within said barrel, a cylindrical enlargement upon said bar, fitting closely within said bore and having a passage extending therethrough to feed the pen and a peripheral passage across said enlarged portion and located so as to be closed by said abutment when said enlarged portion is moved thereagainst.

3. A submerging fountain pen comprising a barrel having a uniform bore terminating in an inwardly projecting abutment upon the interior of the forward end of said bore, a pen bar threaded within said barrel for reciprocation therein, an enlargement upon said bar fitting closely within said bore and having a passage extending therethrough to feed the pen and a passage through said enlarged portion and located so as to be closed by said abutment when said enlarged portion is moved thereagainst, a cap for said barrel and means on said cap for engaging said pen bar to rotate the same.

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

MORRIS W. MOORE.

Witnesses:

JOHN D. LAMOND,
A. C. WHITTEMORE.

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