

(No Model.)

G. S. PARKER.
FOUNTAIN PEN.

No. 606,231.

Patented June 28, 1898.

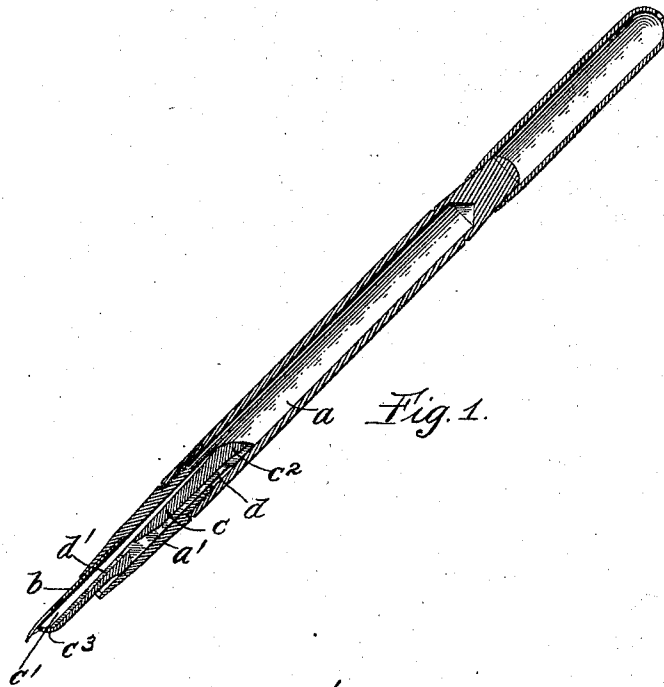


Fig. 1.

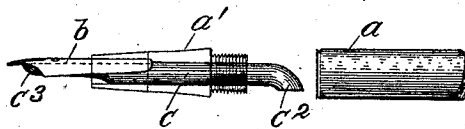


Fig. 2.

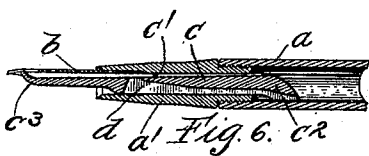


Fig. 3.



Fig. 4.



Fig. 5.

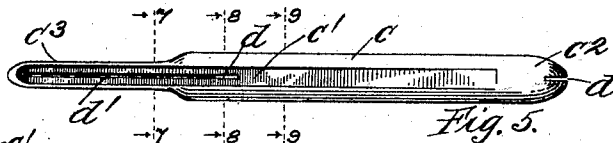


Fig. 6.

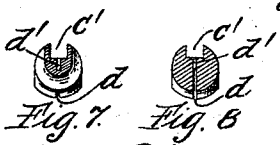


Fig. 7. Fig. 8.



Fig. 9.

Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE S. PARKER, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 606,231, dated June 28, 1898.

Application filed July 26, 1897. Serial No. 645,884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. PARKER, a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented a certain new and useful Improvement in Fountain-Pens, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to fountain-pens; and its object is to improve the construction and operation of the "feeder" which conveys ink from the reservoir or barrel to the point of the pen.

It has been extremely difficult heretofore to construct a fountain-pen in which the feeder would supply the ink to the point of the pen regularly and in just the right quantity, and a quite common defect has been the liability of the ink to overflow upon the exterior of the nozzle when the pen was inverted and the cap replaced, the fingers being soiled by this ink when the pen was next used. My invention is designed to overcome these objectionable features and to provide a fountain-pen the feeder whereof will operate to supply the proper quantity of ink at a uniform rate of flow and which will return the excess of ink to the barrel when the pen is inverted, thus preventing the objectionable overflow upon the exterior of the nozzle.

My invention will be readily understood by reference to the accompanying drawings, which illustrate a feeder adapted to supply ink to the under side of the pen-point, and in which—

Figure 1 is a longitudinal sectional view of a fountain-pen employing my improved feeder. Fig. 2 is an elevation of the working parts, the nozzle for clearness being illustrated as transparent to show the parts within. Fig. 3 is a view of the feeder and pen from beneath to show their relative positions. Fig. 4 is a similar view from above. Fig. 5 is an enlarged top view of the feeder. Fig. 6 is a longitudinal sectional view of a portion of a fountain-pen employing a slightly-modified form of feeder. Fig. 7 is a cross-sectional view on plane 7 7 of Fig. 5. Fig. 8 is a cross-sectional view on plane 8 8 of Fig. 5. Fig. 9 is a cross-sectional view on plane 9 9 of Fig. 5.

Like letters refer to like parts throughout the several figures.

The barrel *a* is provided with a removable nozzle *a'*, which screws into its end. The pen *b* is held in place in the end of the nozzle by its frictional engagement with the feeder *c*, which consists of a bar passing through the longitudinal bore of the nozzle *a'* into the interior of the barrel. A groove *c'* is provided in the upper face of the feeder, said groove starting at the inner end *c²*, where it communicates with the reservoir. The groove gradually increases in depth to the opposite extremity *c³* beneath the pen, as shown most clearly in Figs. 1, 5, and 6. The inner end *c²* of the feeder is preferably bent to come approximately, if not quite, in contact with the interior wall of the barrel, as shown. A narrow slit *d* is cut in the bottom face of the feeder, said slit passing through the inner end *c²* and downward, preferably ending, however, at a point about diametrically opposite the heel of the pen *b*. This slit is preferably cut deeper at this point to form a passage between the slit *d* and groove *c'* through the feeder. The slit may otherwise be placed in communication with the groove *c'*, however.

I preferably cut a supplemental slit *d'* in the end *c³* of the feeder at the bottom of the groove *c'*, as shown most clearly in Figs. 1, 5, 7, and 8.

When the barrel *a* is filled with ink and the parts assembled as shown in Fig. 1, the device will operate as follows: Ink will be taken up from the wall of the barrel by the curved end *c²* of the feeder and drawn toward its outer end through the narrow slit *d* by the force of capillary attraction, assisted by gravity, passing from the slit into the groove *c'* in the upper face of the feeder, and thence down through the slit *d'* and groove *c'* to the point of the pen. The groove *c'*, as has been stated, is considerably deeper at the end *c³* than at any other point, and thus serves as a reservoir to store a quantity of ink near the point of the pen for instant use, as for long heavy strokes. As the ink is drawn out of the barrel air must be permitted access thereto, and provision for this has been made in the groove *c'*. The air being light will naturally pass through the groove *c'* in the top of the feeder, so that the heavier ink may find a passage

down the slit d , which is unobstructed by air-bubbles. In feeders heretofore employed a frequent source of annoyance has been the collection of air-bubbles in the capillary passages, necessitating "jerkings" of the pen to force out the ink. This difficulty has not been overcome by a common construction which allows access of air through a groove along the bottom of the feeder, the ink-duct being along the top, because the air-bubbles will naturally find a path to the top and often collect in the ink-duct, stopping the flow of ink. It will be appreciated that with my construction a passage for air is provided at the top of the feeder, so that the ink may flow unimpeded through the capillary slit d , and from thence into the groove c' and slit d' at a point near the heel of the pen. An equally important service is performed by this slit d when the pen is inverted. In this condition all excess of ink which was in the groove c' is immediately drained by the slit d and returned to the reservoir, egress of air being permitted by way of the groove.

The supplemental slit d' assists the slit d in performing its functions and, in addition, keeps the extremity of the feeder moist to cause a quick flow of ink to the point of the pen. This slit d' , while advantageous in many respects, is not absolutely essential to the feeder, and in Fig. 6 I have shown a construction wherein it is omitted. I prefer to form all parts, except, of course, the pen itself, of hard rubber; but any suitable material may be used.

I have described and illustrated a feeder adapted to supply ink to the under side of the pen; but my invention may be readily adapted to other constructions, and I do not therefore desire to be understood as limiting myself to the precise construction shown; but,

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

1. In a fountain-pen, the combination with a feeder-bar, the inner end whereof is formed to come into approximate contact with the wall of the ink-reservoir, of a longitudinal groove along the upper side of said feeder-bar, said groove, starting at the inner end, gradually increasing in depth to the portion under the nib of the pen, and a longitudinal capillary slit d in the opposite or under side of the feeder starting at its inner extremity, passing along its under side and only communicating with said groove at a point ap-

proximately under the pen, substantially as described.

2. A feeder for a fountain-pen, consisting of a bar having a longitudinal groove along the side thereof next the pen and communicating with the ink-reservoir, said bar also being provided with a capillary slit passing along the under side thereof and opening into the ink-reservoir throughout a portion of its length, and a capillary passage affording communication between said capillary slit and said groove, substantially as described.

3. A feeder for a fountain-pen, consisting of a bar having a longitudinal groove in the side next the pen communicating with the ink-reservoir, said groove gradually increasing in depth from the inner end to the outer extremity of the bar, said bar also having a capillary slit in its under side communicating at one end with the reservoir and at the other end with said groove, substantially as and for the purpose described.

4. A feeder for a fountain-pen, consisting of a bar having a longitudinal groove in the side thereof next the pen, the inner end of said bar being formed to come into approximate contact with the side of the reservoir, said bar also having a capillary slit d passing along the under side thereof and opening into the ink-reservoir throughout a portion of its length, a capillary slit d' along the bottom of said groove, and a capillary passage affording communication between said slit d and said slit d' , substantially as described.

5. In a fountain-pen, a feeder-bar provided with a capillary ink-duct opening in the reservoir at or near the lower interior wall or side of said reservoir, said capillary duct extending downwardly to an enlarged or deepened portion, said enlarged portion opening into a groove immediately under the pen on the opposite of said bar, to form a continuation of said duct, said groove forming the continuation being enlarged to form an ink-holding chamber immediately under the nib of the pen, the upper portion of said groove communicating with the reservoir to form a vent, substantially as and for the purposes described.

In witness whereof I hereunto subscribe my name this 21st day of July, A. D. 1897.

GEORGE S. PARKER.

Witnesses:

GEORGE L. CRAGG,
A. L. LAWRENCE.

It is hereby certified that in Letters Patent No. 606,231, granted June 28, 1898, upon the application of George S. Parker, of Janesville, Wisconsin, for an improvement in "Fountain-Pens," an error appears in the printed specification requiring correction, as follows: In line 98, page 2, after the word "opposite," the word *side* should be inserted; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 12th day of July, A. D., 1898.

[SEAL.]

WEBSTER DAVIS,
Assistant Secretary of the Interior.

Countersigned:

C. H. DUELL,
Commissioner of Patents.