

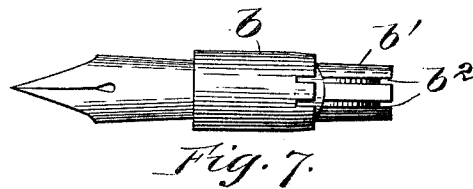
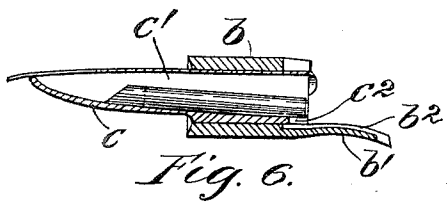
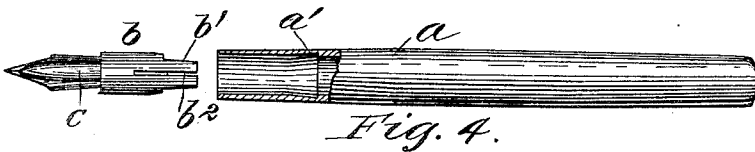
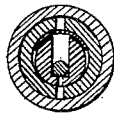
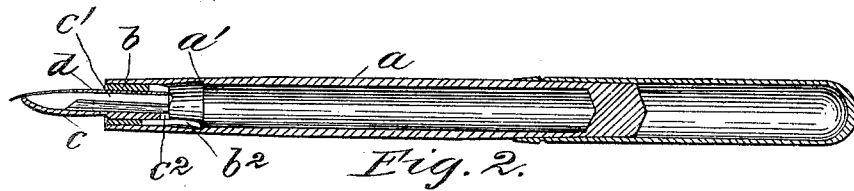
No. 642,151.

Patented Jan. 30, 1900.

G. S. PARKER.
FOUNTAIN PEN.

(Application filed June 30, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

GEORGE S. PARKER, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 642,151, dated January 30, 1900.

Application filed June 30, 1899. Serial No. 722,365. (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. 3,) of which the following is a full, clear, concise, and exact description.

My invention relates to fountain-pens, and has for its object to provide an improved and simplified construction of the nozzle and feeding mechanism.

My invention has to do particularly with that class of pens now known to the trade as "jointless" pens, wherein the nozzle, instead of being screwed upon the end of the barrel and forming a continuation thereof, as heretofore, is made in the form of a cylindrical plug which fits snugly within the mouth of barrel, the sides of the plug being concealed therein.

It has been customary heretofore to construct the feeder with a long shank projecting inwardly into the barrel, the inner end being curved or turned to come into contact with the side of the barrel. This was for the purpose of securing a capillary action or "drawing" of the ink, so that the fountain-pen would feed promptly when required and would carry any surplus ink back into the barrel when the pen was inverted to carry in the pocket. Some such construction as this has been found necessary in order to secure the best results. It has, however, occasioned considerable extra expense in manufacturing fountain-pens to construct the feeder in this form, yet it has been thought best to do so, since no satisfactory substitute for such a construction has heretofore been found.

The object of the present invention is to construct a "jointless" fountain-pen simpler in construction than the old and requiring less labor in the making, but still being equally efficient.

As a result of my experiments I have been able to do away with the long shank on the feeder, with its curved end, and to use a short feeder reaching barely to the inner extremity of the nozzle. I gain the requisite capillary action by a new construction of the nozzle, and the structure thus produced constitutes the subject-matter of the present invention.

In the accompanying drawings I have illustrated a fountain-pen constructed in accordance with my invention.

Figure 1 is a view in elevation thereof. Fig. 2 is a vertical sectional view. Fig. 3 is a cross-sectional view on line 3 3 of Fig. 1. Fig. 4 illustrates the nozzle, which holds the pen and feeder, as removable from the barrel. Fig. 5 shows the nozzle in section. Figs. 6 and 7 are detail views illustrating a slight modification.

Similar letters of reference are used to designate the same parts wherever they are shown.

The barrel *a* is cylindrical in form and is provided with an annular recess *a'* in its inner wall near the mouth. The nozzle *b*, in which the feeder *c* and pen *d* are mounted, is in the form of a cylindrical plug adapted to fit snugly within the mouth of the barrel and is provided on its inner end with a resilient locking-tongue having engagement with the recess *a'*, whereby the nozzle, with its contained parts, is held in position. To fill the barrel, it is necessary merely to grasp the pen and feeder with the thumb and finger and give a slight pull, whereupon the locking-tongue will be disengaged from the annular recess, permitting the nozzle to be withdrawn. After the barrel is filled with ink, the nozzle may again be inserted and pushed into the barrel until the locking-tongue snaps into place. The feeder is preferably made rather short, extending inwardly only about as far as the inner end of the nozzle. Any desired construction of the feeder may be used. I have shown a bar-feeder having a groove *c'* in its upper side and a narrow capillary slit *c²* in its under side communicating with the groove *c'*, forming capillary passages for the ink. The feeder *c* preferably terminates at substantially the inner end of the nozzle—that is, at the foot or base of the rearwardly-extended locking-tongue *b'*. This locking-tongue, which is formed upon the inner end of the nozzle and engages with the annular recess in the inner wall of the barrel to hold the nozzle, with its contained parts, in position, as described, is provided with one or more narrow capillary slits *b²*, affording a capillary passage for the ink between the side of the barrel and the ink-ducts of the

feeder. The slit or slits b^2 in the locking-tongue may be cut longitudinally therein by a saw and preferably extend a short distance into the main body of the nozzle. This slit is preferably cut clear through the locking-tongue, as illustrated in the first five figures; but it may be desirable in some cases to slit the locking-tongue only part way through, and I have accordingly shown in Figs. 6 and 7 a construction wherein two narrow fissures or slits $b^2 b^2$ are cut in the top of the locking-tongue, extending clear through the same only at its tip.

The operation of my improved fountain-pen will be understood at a glance. When it is tipped downward, as in writing, the ink is drawn from the side of the barrel by the capillary action of the little fissure or slit b^2 and is carried through it to the slit c^2 in the feeder, and thence through the groove c' to the point of the pen. By properly proportioning the parts I have constructed a fountain-pen which is always ready for instant use, ink being carried in just the proper quantity to the point of the pen. When the pen is inverted to replace in the pocket, an especial advantage of this construction is manifested. The ink, instead of remaining in the nozzle or overflowing and oozing down the outside of the barrel, is drawn downward by the capillary action of the little slits and is carried directly to the side of the barrel by way of the locking-tongue b' . The locking-tongue, then, besides serving to maintain the nozzle in position, thus supplements the feeder, acting precisely as did the curved shank heretofore used and permitting the feeder to be made shorter and at less expense.

I am aware that the nozzle has heretofore been made in the form of a plug fitting within the barrel and having a tooth projecting from the inner end thereof and engaging the barrel, and this I do not claim; but,

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

1. A fountain-pen, consisting of a barrel, a nozzle b carrying a pen d and feeder c said feeder having capillary ink-ducts therein, said nozzle being adapted to fit snugly within the end of the barrel, and a resilient tongue b' provided upon the inner end of said nozzle and having engagement with the side of the barrel, said tongue having a slit extending longitudinally thereof and affording a capillary passage for the ink between the side of the barrel and the ink-ducts of the feeder, substantially as and for the purpose set forth.

2. In a fountain-pen, the combination with a barrel, of a plug or nozzle b therefor adapt-

ed to fit within the bore of the barrel, a pen and feeder mounted within the nozzle, said feeder having capillary ink-ducts therein, and a resilient locking-tongue b' provided upon the inner end of said nozzle, the inner end of said feeder terminating substantially at the root of the said resilient locking-tongue, said tongue having one or more capillary passages provided therein and communicating with the ink-ducts in the inner end of the feeder at the root of the tongue, substantially as and for the purpose set forth.

3. In a fountain-pen, the combination with a barrel having an annular recess a' in its inner wall, a nozzle b adapted to fit snugly within the mouth of said barrel, a resilient locking-tongue b' provided upon the inner end of said nozzle and having engagement with the said annular groove, said locking-tongue having one or more capillary passages therein, and a pen and feeder mounted in said nozzle, said feeder having a capillary passage c^2 communicating with the capillary passage b^2 in said locking-tongue, substantially as set forth.

4. In a fountain-pen, the combination with a barrel having a cylindrical bore, of a cylindrical plug adapted to fit within said bore, a pen and feeder mounted in the plug, said feeder having a capillary passage c^2 therein, and an extension b' of the nozzle for holding the nozzle in position within the bore of the barrel, said extension having a capillary passage communicating with the capillary passage c^2 of the feeder, substantially as set forth.

5. In a fountain-pen, the combination with a barrel a having a cylindrical bore and having an annular recess a' in its wall near the mouth, of a nozzle in the form of a cylindrical plug adapted to fit snugly within the mouth of the barrel, a pen and feeder mounted in said nozzle, said feeder having ink-ducts therein for conveying ink through the nozzle to the point of the pen, the nozzle, pen and feeder being removable from the barrel as a single piece, and a resilient locking-tongue b' formed upon the inner end of said nozzle and adapted to engage with the annular recess in the barrel, said locking-tongue having one or more capillary passages therein extending from its extremity to the main body of the nozzle and communicating with the ink-ducts of the feeder, substantially as set forth.

In witness whereof I hereunto subscribe my name this 23d day of June, A. D. 1899.

GEO. S. PARKER.

Witnesses:

F. H. GREENE,
HENRY CODY.