

No. 635,700.

Patented Oct. 24, 1899.

G. S. PARKER.  
FOUNTAIN PEN.

(Application filed June 30, 1899.)

(No Model.)



Fig. 1.

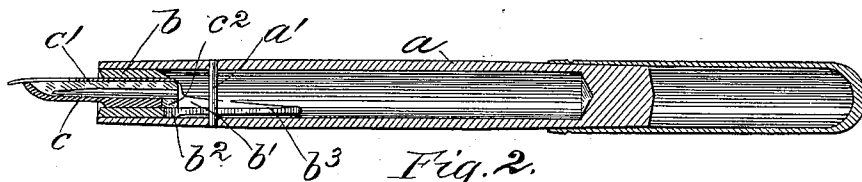


Fig. 2.

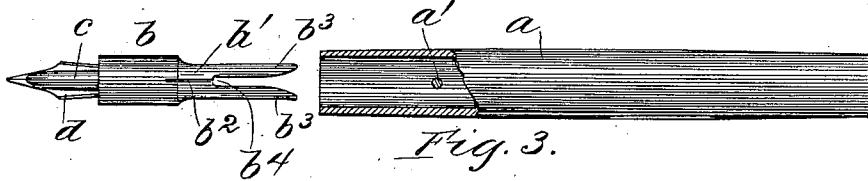


Fig. 3.

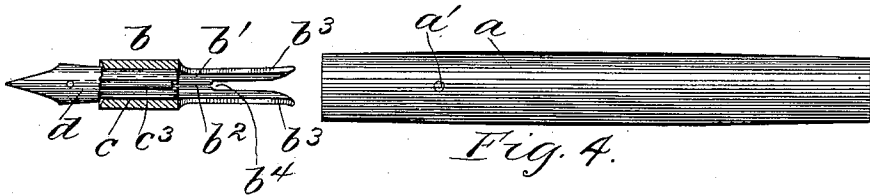


Fig. 4.

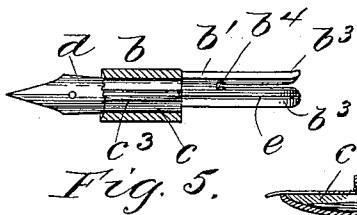


Fig. 5.

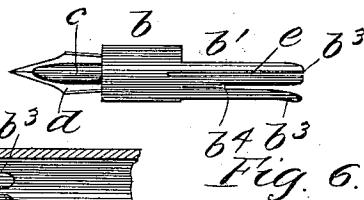


Fig. 6.

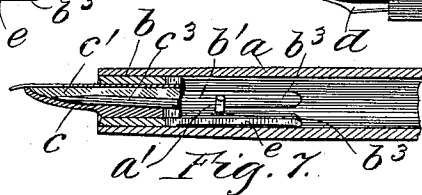


Fig. 7.

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# UNITED STATES PATENT OFFICE.

GEORGE S. PARKER, OF JANESVILLE, WISCONSIN.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 635,700, dated October 24, 1899.

Application filed June 30, 1899. Serial No. 722,366. (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. 4,) of which the following is a full, clear, concise, and exact description.

My invention relates to fountain-pens, and particularly to that class of fountain-pens wherein the nozzle instead of being screwed onto the end of the barrel and forming a continuation thereof, as heretofore, is made in the form of a plug adapted to fit in the end of the barrel, its sides being concealed thereby. These pens are generally known as "jointless" pens because the barrel is continuous and has no joint. They are widely used at present, being preferred by many persons because there is less liability of breakage and because they are easy to fill and of course do not leak because there is no joint to leak through.

It is the object of the present invention to provide a novel construction of the nozzle, particularly with reference to the means for holding the same within the barrel, but also with a view toward simplifying the construction of the feeder. An efficient feeder heretofore widely used is made with a shank projecting into the barrel and turned or curved at its end to come into contact with 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 when inverted to carry in the pocket would return the surplus ink to the barrel instead of allowing it to remain in the nozzle or to ooze down the outside of the barrel. Some such construction has been found necessary to secure the best results. It has, however, occasioned considerable extra expense in manufacturing fountain-pens to form the feeder with this curve at the end, yet it has been thought best to do so, since no satisfactory substitute for such a construction has heretofore been found.

One of the advantages of the present invention is that I am enabled to use a short feeder, attaining practically the same results as were secured with the long curved feeder

by a new construction of the nozzle. The means which I employ for maintaining the nozzle in position within the barrel, while permitting the use of a simplified feeder, as indicated above, possesses certain mechanical advantage over other fountain-pen structures in that the nozzle is held more positively and is prevented from turning in the barrel, as well as from being accidentally withdrawn therefrom.

Generally speaking, the fountain-pen of my invention comprises a barrel having a pin or projection in its interior, a nozzle in the form of a plug fitting into the bore of the barrel and having an extension upon its inner end for engaging the pin or projection in the barrel and so maintaining the nozzle in position, and a pen and feeder mounted in the nozzle so that the three parts are removable from the barrel as a single piece.

My invention will be more particularly described and further features thereof set forth by reference to the accompanying drawings, which illustrate an embodiment thereof, and in which—

Figure 1 is a view in elevation of the exterior of my fountain-pen. Fig. 2 is a vertical sectional view. Fig. 3 shows the nozzle with its contained parts removed from the barrel. Fig. 4 is a somewhat similar view looking in an opposite direction and showing the nozzle in section and the pen partly broken away. Figs. 5, 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* of the fountain-pen is provided with a cylindrical bore in the mouth of which the cylindrical nozzle *b* is adapted to fit, and within the barrel is provided a projection or catch *a'*, (in this particular instance a pin extending transversely through the barrel,) with which an extension *b'* of the nozzle is adapted to engage to hold the nozzle in place. A feeder *c* and pen *d* are fixedly mounted in the nozzle, so that these three parts may be inserted in the barrel or withdrawn therefrom as a single piece.

The extension *b'* of the nozzle is preferably formed with two resilient arms *b<sup>s</sup> b<sup>s</sup>*, cut away at the ends to form flaring jaws for engaging

between them the transverse pin  $a'$  in the barrel. The arms or jaws  $b^3 b^3$  are cut away a trifle at  $b^4$ , as indicated, so that they may more positively engage the pin  $a'$ , and a narrow slit  $b^2$  is cut from the point  $b^4$  up to and preferably slightly into the main body of the nozzle.

The feeder  $c$  has a narrow groove  $c'$  in its upper side next the pen and a narrow slit  $c^2$  in its inner end, through the lower part thereof communicating with the groove. When the parts are properly assembled, the slit  $c^2$  in the feeder registers with the slit  $b^2$  in the extension of the nozzle, so that a capillary passage for the ink is thus provided between the side of the barrel and the groove or supplemental reservoir  $c'$  beneath the pen. The extension  $b'$  is preferably so formed that a slight crack or interstice will appear between it and the side of the barrel, as illustrated in Figs. 2 and 7, thus furnishing an additional capillary passage for the ink.

A little cylindrical rod  $c^3$  is preferably provided in connection with the feeder  $c$  to lie in the groove  $c'$  therein and form capillary passages between itself and the wall of the groove.

In Figs. 5, 6, and 7 I have shown one of the arms  $b^3$  of the extension of the nozzle as somewhat enlarged and provided with a capillary slit  $e$  therein registering with the slit  $c^2$  in the feeder for the purpose of conveying the ink. I have also indicated the pin  $a'$  as extending only part way through the barrel.

It is obvious that modifications may be made in my invention, which will readily suggest themselves to those skilled in the art, and I do not wish to be understood as limiting myself to the precise construction illustrated. It should be stated, however, that I do not wish to claim, broadly, in this application, an extension of the nozzle having a slit therein communicating with the feeder and forming a capillary passage for conveying the ink to and fro between the side of the barrel and the groove in the feeder under the nibs of the pen, since I have made this the subject-matter of another application, Serial No. 722,365, filed June 30, 1899.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

1. A fountain-pen comprising a barrel  $a$  having a pin or projection  $a'$  therein, a nozzle  $b$  adapted to fit within the mouth of the barrel, said nozzle being cut away on its inner end to form an extension  $b'$ , the said extension being notched or cut away at  $b^4$  to engage the pin or projection in the barrel, whereby the nozzle is removably held in place, a pen and feeder mounted in said nozzle, said feeder having ink-ducts opening into the barrel and adapted to convey the ink to the point of the pen, and means for conveying ink from

the side of the barrel to the ink-ducts in said feeder, substantially as described.

2. A fountain-pen comprising a barrel  $a$  having a pin or projection  $a'$  therein, a nozzle  $b$  adapted to fit within the mouth of the barrel, said nozzle having an extension  $b'$  for engaging said pin or projection and maintaining the nozzle in place within the barrel, said extension having a slit  $b^2$  longitudinally thereof, and a pen and feeder mounted in said nozzle, said feeder having a narrow slit  $c^2$  in the side thereof communicating with the slit  $b^2$  in said extension of the nozzle; substantially as described.

3. A fountain-pen comprising a barrel  $a$  having a pin or projection  $a'$  in its interior extending transversely across the bore, a nozzle  $b$  in the form of a cylindrical plug adapted to fit within the mouth of the barrel, resilient arms  $b^3 b^3$  on said nozzle adapted to engage said transverse pin or projection between them to hold the nozzle in place, and a pen and feeder mounted within the nozzle; substantially as described.

4. A fountain-pen comprising a barrel  $a$  having a projection  $a'$  in its interior extending transversely across the bore of the barrel, a nozzle  $b$  adapted to fit in the end of the barrel, resilient arms  $b^3 b^3$  formed upon said nozzle and adapted to be spread apart by the said projection and to engage the same, whereby the nozzle is positively maintained in place within the barrel, a capillary passage  $b^2$  being provided in the nozzle, and a pen and feeder mounted in said nozzle, said feeder having a capillary passage  $c^2$  therein communicating with the passage  $b^2$  in the nozzle; substantially as described.

5. A fountain-pen comprising a barrel  $a$  having a transverse pin  $a'$  in its bore, a nozzle fitting in the end of the barrel, a pen and feeder mounted in the nozzle, and an extension  $b'$  formed upon the inner end of the nozzle, said extension being divided by a longitudinal cut forming two resilient arms or jaws  $b^3 b^3$ , between which the pin  $a'$  is adapted to be engaged to hold the nozzle in position, said extension having a narrow slit  $b^2$  dividing said resilient arms and communicating with the feeder, substantially as and for the purpose set forth.

6. The barrel provided with the inner transverse pin  $a'$ , in combination with a nozzle  $b$  having a resilient extension  $b'$ , said extension being notched or cut away at  $b^4$  to engage with said pin, whereby the nozzle is held in position when inserted within the barrel, substantially as and for the purpose specified.

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

GEO. S. PARKER.

Witnesses:

F. H. GREEN,  
HENRY CODY.