

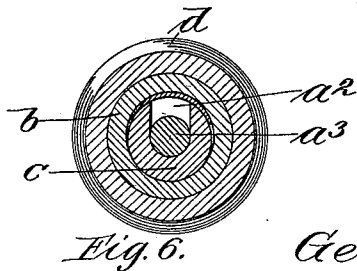
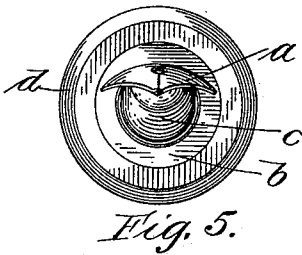
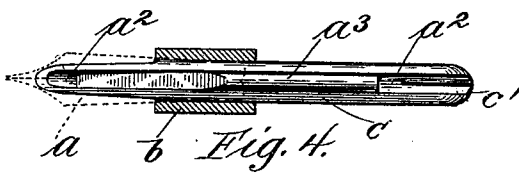
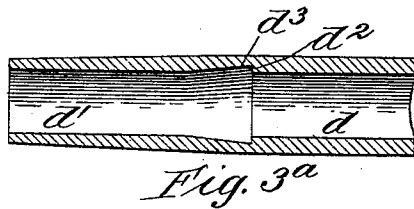
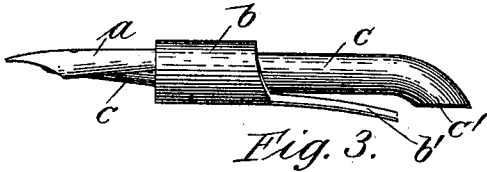
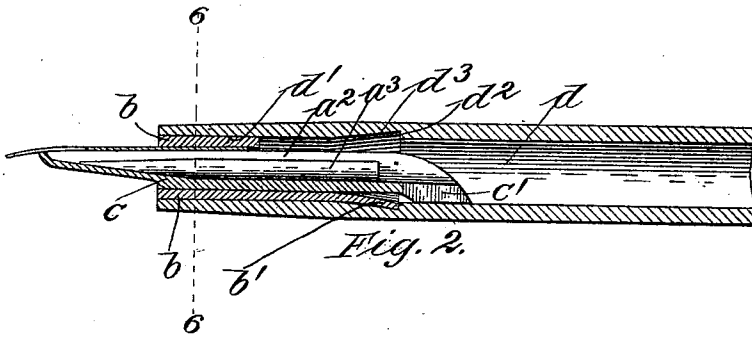
No. 622,256.

Patented Apr. 4, 1899.

G. S. PARKER.
FOUNTAIN PEN.

(Application filed Mar. 7, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE SAFFORD PARKER, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 622,256, dated April 4, 1899.

Application filed March 7, 1898. Serial No. 672,957. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SAFFORD 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. 2,) of which the following is a full, clear, concise, and exact description.

My invention relates to a fountain-pen; and its object is to improve and simplify the construction of certain parts of the pen and to overcome thereby a number of defects which have existed in nearly if not quite all fountain-pens hitherto in use.

It has been a common construction heretofore to provide a nozzle adapted to be screwed upon the end of the barrel and to form a continuation thereof. The pen itself was inserted in the end of the nozzle and a feeder passing through the nozzle served to conduct the ink from the interior of the barrel to the point of the pen. The nozzle in some cases instead of being screwed on the end of the barrel was made tapering and was designed to be retained within the barrel by frictional engagement with a correspondingly-tapered portion thereof. The length of the nozzle also has been varied somewhat; but with a few such slight modifications as these the construction above described has been adopted almost universally by fountain-pen manufacturers. The objections most strongly urged against the arrangement of parts above described have been principally these: First, unless the nozzle was screwed upon the end of the barrel very tightly the ink was quite liable to leak out between the faces of the adjoining parts, any irregularity or imperfection in the joint being certain to produce such a result. This action was considerably increased by the effect of suction produced by the fingers of the writer, who grasps the barrel at this point. In the second place the nozzle was quite apt to be broken off at its point of juncture with the barrel, the thinness of the material at this point often causing breakage when the pen was subjected to a slight strain, as it frequently is when carried in the pocket. A third objection, somewhat analogous to the one first mentioned, is that the nozzle was apt to be screwed so tightly on the end of the barrel that it could not be

easily removed and was frequently broken in the attempt. This effect was increased by the ink drying in the interstices between the screw-threads.

In accordance with my invention the nozzle takes the form of a plug, wherein are mounted the pen and feeder, said plug preferably being cylindrical in shape, finished with a smooth exterior, and adapted to fit snugly into the mouth of the barrel. An elastic locking-tongue is mounted upon the plug, preferably being formed integrally therewith and extending rearwardly and laterally therefrom, said tongue thus having an outwardly-projecting end. A groove or recess is formed in the inner wall of the barrel and is adapted to be engaged by the end of the aforesaid locking-tongue, the plug being inserted into the bore of the barrel until the end of the tongue snaps into place, thus positively locking the plug, with its contained parts, in position. The groove or recess is preferably cut in a V shape, the rear arm of said V being substantially at right angles with the wall of the barrel, forming a shoulder, against which the end of the locking-tongue abuts, thus preventing the plug from being forced too far into the barrel. When it is desired to remove the plug, together with the pen and feeder mounted therein, for the purpose of filling the barrel with ink, it is only necessary to grasp the projecting portion of the pen and give a slight pull, whereupon the plug may be freely withdrawn. The annular groove may thus be generally described as having opposing surfaces angularly disposed with relation to the inner surface of the barrel.

I will explain the details of my invention more specifically by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal elevation of a fountain-pen constructed in accordance with my invention. Fig. 2 is a sectional view thereof on line 2 2 of Fig. 1, somewhat enlarged. Fig. 3 is a side view of the plug, showing the pen and feeder mounted therein. Fig. 3^a is a longitudinal sectional view of the barrel. Fig. 4 is a plan view of the feeder, the plug inclosing the same being shown in section and the pen in dotted lines. Fig. 5 is an end view of the fountain-pen, and Fig. 6 is a cross-sectional view thereof on line 6 6 of Fig. 2.

Like parts are indicated by like letters of reference throughout the several figures.

The pen *a* is securely held within the plug *b* by the frictional engagement of the feeder *c*, which passes through the plug, one end thereof projecting within the barrel *d* and the opposite or outer end terminating under the nib of the pen. The inner end *c'* of the feeder is preferably bent to come into approximate contact with the side of the barrel, the more readily to take up ink therefrom. I have shown a slot *a²* along the top of the feeder and a cylindrical rod *a³* lying in such slot, since I have found that such a construction will serve very well to secure capillary action necessary for a steady feeding of the ink from the interior of the barrel to the nib of the pen. Such construction of the feeder, however, is not essential to my present invention, since a feeder of any desired construction may be employed.

The plug *b* is cylindrical in shape and is finished with a smooth exterior, fitting snugly but not tightly into the bore of the barrel, which has a corresponding smooth surface. An annular V-shaped recess or channel *d³* is cut in the inner wall of the barrel, such recess being so disposed that one side thereof forms a shoulder *d²* at right angles with the wall of the barrel. The inner end of the plug is cut away and formed to constitute an elastic locking-tongue having an outwardly-projecting end, so that when the plug is inserted in the bore of the barrel the end of the tongue snaps into the annular recess and holds the plug positively in its place. The rear wall *d²* of the recess is so abrupt that it is impossible for the end of the tongue to pass it, so that there is no danger of the plug being jammed too far into the barrel.

When the barrel is to be refilled with ink, the plug, together with the pen and feeder mounted therein, may be readily removed by grasping the projecting portion of the pen and feeder and giving a slight pull, whereupon the tongue *b'* will be disengaged from the annular recess *d³* and the plug may be freely withdrawn.

It will be observed that by employing my invention the portion of the fountain-pen which is grasped by the fingers in writing is formed in one piece, with no cracks or joints through which the ink may leak and having no shoulder, channel, knurled rib, or the like to interfere with the convenience of the user. It also will be observed that the fountain-pen illustrated will not be liable to break when subjected to a slight strain, having no external joint at which the material is weakened.

It might be urged, perhaps, at first glance that ink would be liable to ooze out through the crack between the exterior of the plug and the inside wall of the barrel. If the parts are made with ordinarily skilful workmanship, however, I have found that this

will not be the case. The reason that a crack or joint on the side of the barrel is so liable to permit the leakage of ink is that the fingers of the writer cause a pumping or sucking action which draws the ink out through any cracks or fissures which may be under them.

It will be understood that the form of fountain-pen shown in the drawings may be modified to some extent without departing from the spirit of my invention, and I do not wish to be understood as limiting myself to the precise construction illustrated. Obviously the feeder and plug might be formed in one piece or other changes made and the essential features of the invention retained.

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 jointless or continuous barrel having an annular groove or recess in its inner wall near the mouth of the barrel, of a plug constituting the nozzle of the fountain-pen, said plug having a smooth cylindrical exterior adapted to fit removably within the bore of the barrel and to be concealed thereby, a pen and feeder fixedly mounted within said plug, and an elastic locking-tongue carried by said plug for engaging the annular groove in said barrel, thereby serving to lock the plug positively in position in the mouth of the barrel, substantially as set forth.

2. In a fountain-pen, the combination with a jointless or continuous barrel having a smoothly-finished surface at its mouth and having an annular groove in its inner wall, the walls of the said annular groove being angularly disposed with relation to the inner surface of the barrel, of a plug having a smoothly-finished cylindrical exterior adapted to fit removably within the mouth of said barrel, a pen and feeder fixedly mounted in said plug, and an elastic locking-tongue carried upon the inner end of the plug and having an outwardly-projecting end for engaging with the annular groove in the inner wall of the barrel and serving to lock the plug positively in position, substantially as described.

3. In a fountain-pen, the combination with a barrel *d* having a groove or recess *d³* in its inner wall near the mouth of the barrel, of a plug or nozzle wherein are mounted a pen and feeder, and an elastic locking-tongue extending from the plug or nozzle and having engagement with said groove, whereby the plug is locked in position in the mouth of the barrel, substantially as described.

In witness whereof I hereunto subscribe my name this 3d day of March, A. D. 1898.

GEORGE SAFFORD PARKER.

Witnesses:

W. F. PALMER,
MAY NORRIS.