

PATENT SPECIFICATION

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534,683

Application Date (in United Kingdom): Aug. 11, 1939. No. 1767/41.

(Divided out of Application No. 23251/39.)

Complete Specification Accepted: March 13, 1941.



COMPLETE SPECIFICATION

Fountain Pen

We, THE PARKER PEN COMPANY, a corporation duly organized under the laws of the State of Wisconsin, of Corner of Court and Division Streets, Janesville, State of Wisconsin, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention, which is divided from our co-pending Application for Letters Patent No. 23251/39 (Serial No. 534,657), relates to improvements in fountain pens and applies particularly to the closure cap for the same.

As in other fountain pens, the barrel of the pen contains the ink feed mechanism which extends to the writing point, and the closure cap open at one end and closed at its other end, is applied to the barrel, the open end of the cap having an outside diameter of the main barrel wall. It is adapted to fit upon the reduced barrel end portion so as to uniformly abut a shoulder on the barrel. In this manner, the cap can be applied with its outer surface disposed flush with the outer exposed barrel wall.

The invention also is characterized by the provision of means for yieldably retaining the cap upon the barrel in engagement with the shoulder. These means include a member mounted in the forward part of the cap and comprising an annular series of spaced longitudinally extending spring sections bowed towards the axis of the cap sufficiently for the same to be depressed and placed under tension, as said cap is mounted on the forward end of the barrel.

Other objects and advantages will become apparent as this description progresses and by reference to the drawings wherein:

Fig. 1 is a longitudinal section through a portion of a pen with the cap applied.

Fig. 2 is a transverse section through the cap on line 2—2 of Fig. 3, and the corresponding line of Fig. 3, and

Fig. 3 is a longitudinal section on line 3—3 of Fig. 2.

In the embodiment illustrated, the cap

1 contains an ink feed mechanism, as a whole indicated at 2, and communicating with the interior of the barrel through the tube 3. The mechanical construction of this ink feed mechanism or filling mechanism of the cap, not shown, does not form the subjectmatter of the present invention. The ink feed mechanism 2 is enclosed in a shell which at the front, tapers to the point at which the nib 4 projects therefrom.

The cap 5 is adapted to be retained upon the barrel at either its forward end, as shown in Fig. 1, when the pen is not in use, or at its rear end. In either position it is slip fitted so as to be readily applied and removed by merely exerting an endwise force thereon.

The cap 5 includes an outer open-ended cylindrical shell 6 formed of metal or other suitable material, one end of which is closed by a tubular insert 7 and to which a clip 9 of any desired construction is attached, as for instance, by means of a ring 8 and screw 10.

The tubular insert 7 extends over a portion of the shell 6, and in the interior of the shell beyond said tubular insert, there is another insert 12 of sheet metal. As shown in Fig. 1, the shell insert 12 is provided near its forward end with slits 14 dividing the insert 12 longitudinally into a plurality of spring fingers 15 so positioned that when the cap 5 is mounted over the writing end, as shown in Fig. 1, these fingers 15 are alined between the filling mechanism 2 and a reduced shouldered portion 13 of the barrel. At this reduced portion of the barrel, a ring 16 is mounted, which ring advisably is provided with circumferential spaced ribs 17. The spring fingers 15 of the cap 5 are bowed inwardly to such an extent that when the cap is placed on the front end of the pen, they engage the annular ribs 17 under sufficient tension to yieldably grip and retain the cap 5 in position on the pen. The outer diameter of the main portion of the barrel 1 is substantially equal to the outer diameter of the adjacent open end portion of the cap 5, and the shouldered extension 13 of the barrel is of

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such reduced diameter than the open end of the cap 5 abuts against the shoulder 18 of the barrel with the barrel and cap surfaces disposed in flush relation, as shown in Fig. 1.

With this arrangement, the open end of the cap 5 is sealed against the barrel providing an air tight closure for the writing end portion of the pen.

The insert 7 may be so related to the outer shell of the feeding mechanism as to further aid the sealing of the writing end portion of the pen. But preferably this insert is of such thickness and extends into the shell of the cap such a distance that while it lies in close proximity to the outer wall of the ink feed shell, it will not contact the same sufficiently to mar the surface thereof.

This cap arrangement aids in maintaining the ink feed mechanism in the desired moist condition during periods of non-use of the pen, thereby also rendering the pen ready for immediate writing when the cap is removed. It also improves the shaping of the pen and facilitates the shaping of the pen as well as enhancing the appearance and the balance for use.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A fountain pen with a barrel having a cylindrical outer wall with a reduced forward end portion provided with a shell-like extension enclosing the ink feed mechanism, and a closure cap adapted to fit upon the reduced barrel end portion,

including means between the cap and the part of the barrel adapted to be closed by the cap for yieldably and releasably retaining the cap on the barrel in condition to be removed merely by applying pressure outwardly thereto, and means between the cap and the barrel for limiting the extent to which said cap may be moved longitudinally upon the barrel, the open end of the cap having the same outside diameter as the main barrel, so that the cap may be mounted on the front end of the barrel with its outer surface disposed flush with the outer exposed barrel wall.

2. A fountain pen, as set forth in claim 1, including as means for yieldably retaining the cap on the barrel, a member mounted in the forward part of the cap and having an annular series of spaced longitudinally extending spring sections bowed towards the axis of the cap sufficiently for the same to be depressed and placed under tension as the cap is mounted on the forward end of the barrel, and a ring member positioned adjacent the forward end of the barrel and having an exposed annular rib projecting beyond the adjacent surface of the barrel, the member mounted in the forward part of the cap being placed under tension by the rib on said ring, as said cap is mounted on the forward end of the barrel.

Dated this 10th day of February, 1941.

For the Applicants,
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Chartered Patent Agents,
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Fig.

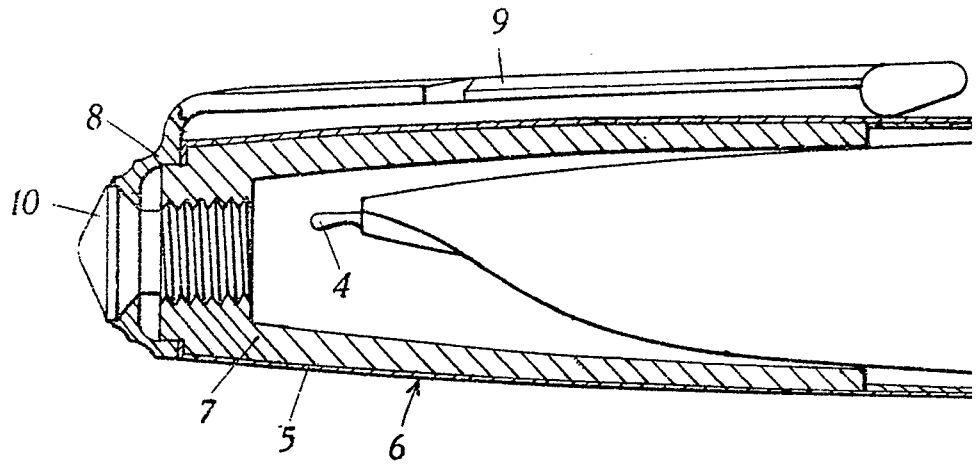
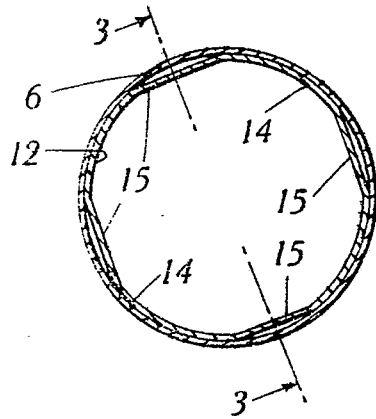


Fig. 2.



[This Drawing is a full-size reproduction of the Original.]

Fig. 1.

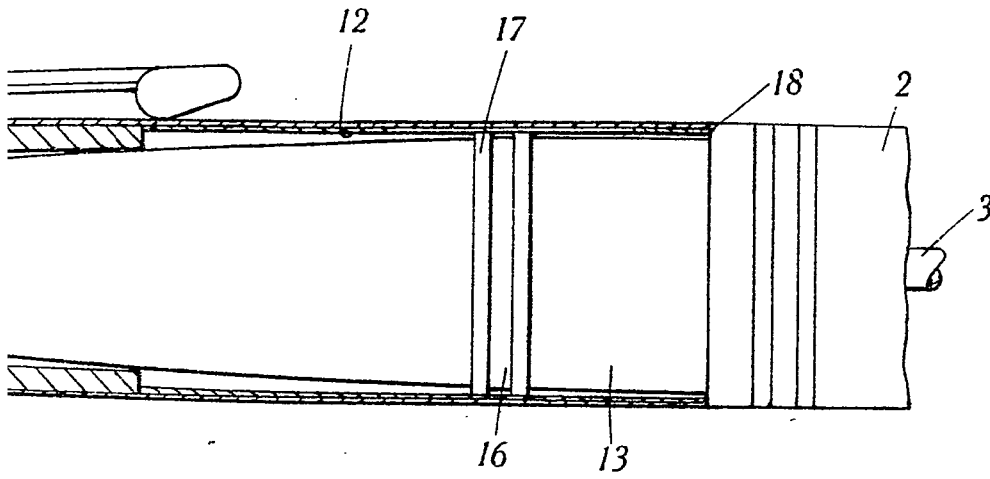


Fig. 3.

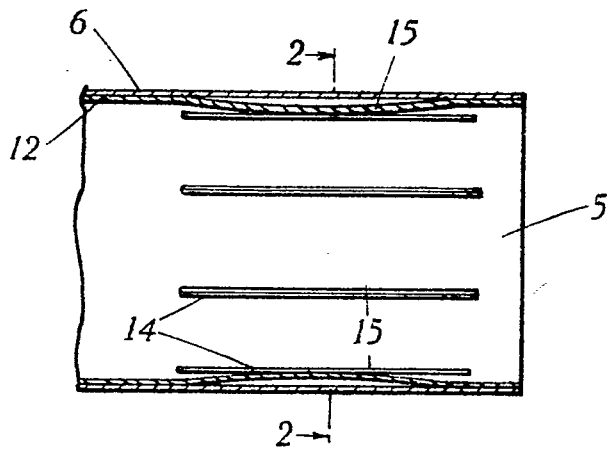


Fig. 1.

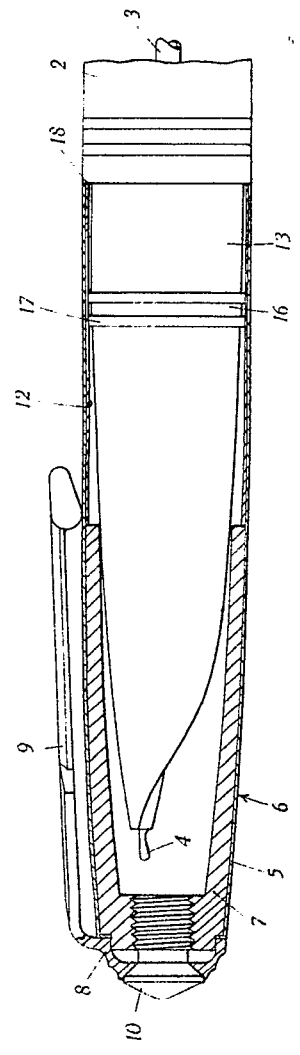


Fig. 2.

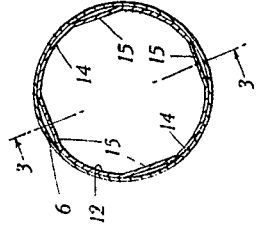
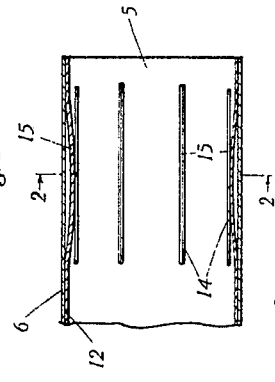


Fig. 3.



[This Drawing is a full-size reproduction of the Original.]