

# RESERVE COPY PATENT SPECIFICATION

612,867



Convention Date (France) : March 25, 1943.

Application Date (in United Kingdom) : June 3, 1946. No. 16800/46.

Complete Specification Accepted : Nov. 18, 1948.

## ERRATUM

SPECIFICATION NO. 612,867

In the heading on page 1, for "March 25, 1943" read "March 25, 1946".

THE PATENT OFFICE,

10 March, 1949

DS 90135/4/3245 150 3/49 R

5 the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 The sealing of fountain pens and similar articles presents one of the most difficult problems on account of the deposition which takes place inside the cap due to changes of temperature and the consequent dampness on the interior walls which results in inking of those parts of the pen with which the fingers  
15 are frequently in contact.

The object of the present invention is improvements in fountain pens, stylographs and similar articles, which solves the above-mentioned problem.

20 According to the present invention the cap has at least one annular groove on its interior surface positioned so that when the cap is in position on the pen, the groove or grooves are beyond the extreme end of the feed  
25 holder.

By "annular grooves" is meant grooves which are each a complete circle and separate from the others. Consequently, the grooves break the continuity of the surface of the  
30 interior of the cap in such a way as to prevent the ink from running on to the body of the pen itself. These annular grooves can be of any appropriate section; preferably they will have on the side nearest to the body  
35 of the pen a wall that is substantially perpendicular to the axis of the pen.

In addition the interior space of the cap when the fountain pen is closed may be sealed by pressure on the interior wall of the cap,  
40 of a conical part on the body of the pen having the same angle as the cap wall, this arrangement permitting a particularly tight joint.

This arrangement is particularly suitable  
45 in cases where the cap is held in position when the pen is closed by an elastic ring as described in my co-pending application No. 16801/46 (Serial No. 612,868). In this case the cap is not held in place by a definite  
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on a surface perpendicular to the axis, the tightness of the joint is adequate, if it is  
55 effected by the conical abutment of the interior of the cap against a projection of corresponding shape on the body of the fountain pen.

The accompanying drawing is given by  
60 way of example to illustrate the invention and is described below.

Fig. 1 is a longitudinal axial section a first  
embodiment of the invention, and

Fig. 2 is a similar view of a second em-  
65 bodiment.

In the example shown in Fig. 1 the cap  
1 of the pen has in the interior a number of circular grooves 2, for instance three, which  
70 are distributed between the bottom of the cap and the extreme front of the feed holder  
4. These grooves preferably have a wall 3 perpendicular to the axis on the side nearest the body of the pen. In this manner liquid  
75 which may have been deposited on the bottom of the cap 1 and which tends to flow towards the feed holder when the pen is placed in a vertical position, for example, in the pocket,  
is stopped by the first groove and spreads  
80 round it instead of continuing along its path down the cap. If the quantity is such that it flows past the first groove, it is then stopped  
also by the second and then by the third  
85 groove. This arrangement thus effectively prevents deposition from flowing down on to the body of the pen.

In order to prevent any liquid which may  
have flowed past the grooves 2 from trickling between the body of the pen and the lower  
part of the cap it is desirable to close as  
90 tightly as possible the interstice which might exist between these two parts by a suitable joint. Experience has shown that in the case  
where the closing of the cap is effected not  
by a positive lock but by friction, for  
95 example, on a split ring such as that shown at 12 in the drawing, an abutment of one surface perpendicular to the axis against

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Index at acceptance:—Class 146(iii), A6.

COMPLETE SPECIFICATION

Improvements in Fountain Pens and the like.

I, LUCIEN CLARET, a French subject, of 20, Avenue Anatole France, Colombes (Seine), France, 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:—

The sealing of fountain pens and similar articles presents one of the most difficult problems on account of the deposition which takes place inside the cap due to changes of temperature and the consequent dampness on the interior walls which results in inking of those parts of the pen with which the fingers are frequently in contact.

The object of the present invention is improvements in fountain pens, stylographs and similar articles, which solves the above-mentioned problem.

According to the present invention the cap has at least one annular groove on its interior surface positioned so that when the cap is in position on the pen, the groove or grooves are beyond the extreme end of the feed holder.

By "annular grooves" is meant grooves which are each a complete circle and separate from the others. Consequently, the grooves break the continuity of the surface of the interior of the cap in such a way as to prevent the ink from running on to the body of the pen itself. These annular grooves can be of any appropriate section; preferably they will have on the side nearest to the body of the pen a wall that is substantially perpendicular to the axis of the pen.

In addition the interior space of the cap when the fountain pen is closed may be sealed by pressure on the interior wall of the cap, of a conical part on the body of the pen having the same angle as the cap wall, this arrangement permitting a particularly tight joint.

This arrangement is particularly suitable in cases where the cap is held in position when the pen is closed by an elastic ring as described in my co-pending application No. 16801/46 (Serial No. 612,868). In this case the cap is not held in place by a definite

[Price 2/-]

locking action but by elastic pressure which makes possible a certain amount of play; experience has shown that though such play cannot be permitted when the joint is made on a surface perpendicular to the axis, the tightness of the joint is adequate, if it is effected by the conical abutment of the interior of the cap against a projection of corresponding shape on the body of the fountain pen.

The accompanying drawing is given by way of example to illustrate the invention and is described below.

Fig. 1 is a longitudinal axial section a first embodiment of the invention, and

Fig. 2 is a similar view of a second embodiment.

In the example shown in Fig. 1 the cap of the pen has in the interior a number of circular grooves 2, for instance three, which are distributed between the bottom of the cap and the extreme front of the feed holder 4. These grooves preferably have a wall perpendicular to the axis on the side nearest the body of the pen. In this manner liquid which may have been deposited on the bottom of the cap 1 and which tends to flow towards the feed holder when the pen is placed in a vertical position, for example, in the pocket, is stopped by the first groove and spreads round it instead of continuing along its path down the cap. If the quantity is such that it flows past the first groove, it is then stopped also by the second and then by the third groove. This arrangement thus effectively prevents deposition from flowing down on to the body of the pen.

In order to prevent any liquid which may have flowed past the grooves 2 from trickling between the body of the pen and the lower part of the cap it is desirable to close as tightly as possible the interstice which might exist between these two parts by a suitable joint. Experience has shown that in the case where the closing of the cap is effected not by a positive lock but by friction, for example, on a split ring such as that shown at 12 in the drawing, an abutment of one surface perpendicular to the axis against

another is not sufficient to give adequate tightness.

Satisfactory results are obtained however if in accordance with the invention the joint 5 is formed by a frusto-conical projection 5 forming the front termination of the body of the pen, and co-acting with the internal surface 6 of the cap which must also be conical or substantially conical. In the example 10 shown in Fig. 1 the conical projection is provided on a sleeve 7 which serves to hold together the different parts which serve to feed and to protect the nib as described in my co- 15 pending application No. 16803/46 (Serial No. 612,870).

In the alternative shown in Fig. 2 which relates to a fountain pen of current type, the conical projection 8 is provided on the front of a part 9 which fulfils both the function of 20 a feed and a sac holder.

The combined action of the circular grooves and of the conical joint produces particularly satisfactory results as regards tightness. It is clear that these arrangements can be com- 25 bined with others which are already known such as the perforations or vents 10 and 11

in the cap above and below the joint 8.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be per- 30 formed, I declare that what I claim is:—

1. A fountain pen or the like in which the cap has at least one annular groove on its interior surface positioned so that when the cap is in position on the pen the groove or 35 grooves are beyond the extreme end of the feed holder.

2. A fountain pen or the like according to Claim 1 in which the walls of the grooves on the side nearest the body of the pen are 40 perpendicular to the axis of the pen.

3. A fountain pen or the like according to Claim 1 or 2 in which the cap and the body of the pen have corresponding conical bearing 45 faces to provide a tight joint.

Dated this 3rd day of June, 1946.

SEFTON-JONES, O'DELL &  
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15, Great James Street, London, W.C.1,  
Agents for the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1

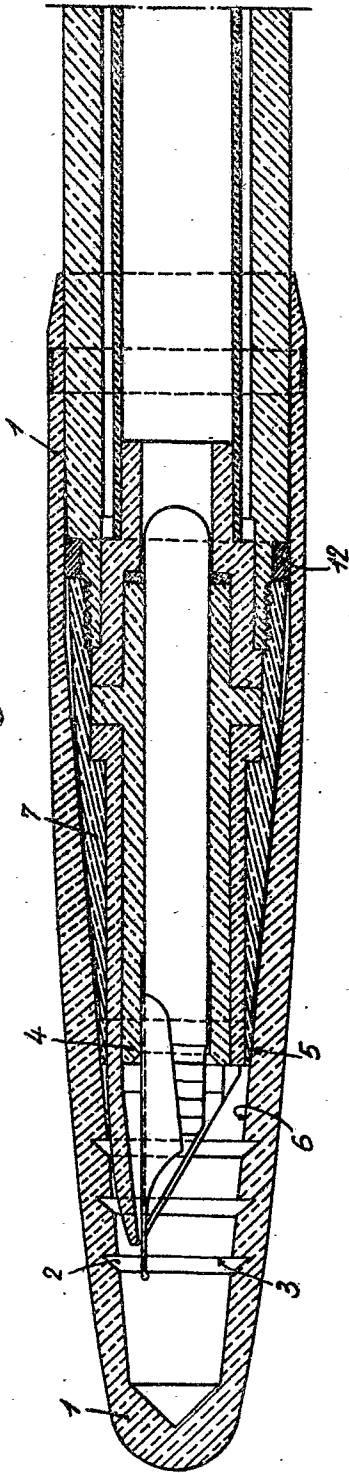


Fig. 2

