

PATENT SPECIFICATION

580,628



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PROVISIONAL SPECIFICATION

Fountain Pens

We, WYVERN FOUNTAIN PEN COMPANY LIMITED, a British Company, of Woodboy Street, Leicester, and MARK SYDNEY FINBURGH and WILLIAM THOMAS HIGGINS, both British Subjects, and both of the Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to fountain pens and more especially to the mounting of the nib and the arrangement of the ink feeding means for supplying the ink.

The most usual method is to secure a separate nib section in the barrel and to secure the nib in this section, or between it and a feed bar inserted in the section. This known method necessitates the making of a joint at the part of the pen that is held in the fingers, and destroys the smooth, unbroken exterior of the pen. The nib section is sometimes made integral with the barrel and the nib secured to the feed bar which is inserted in the end of the barrel. This avoids the joint on the barrel, but makes a break in the contour where the barrel ends and the feed bar projects under the nib.

In accordance with the present invention the barrel extends for practically the full length of the pen and has a feed passage or passages provided in it and the nib is secured direct to this end of the barrel. There is thus no separate nib section and no separate feed bar, and the contour desired for the barrel may continue to the end of the pen. An external mounting of the nib on the barrel is preferred but a shallow recess may be provided to receive the nib and give a flush mounting if it is desired.

In a convenient embodiment of construction the end of the barrel which is to receive the nib is provided with an annular groove and part of the rear end of the nib is formed so that it will fit around a portion of this groove where it is overlaid by an attachment ring. The nib will be given a shape conforming with that of the end of the barrel and its side edges may be slightly inturned to enter grooves formed on opposite sides of the end of the barrel. By this means

when the inturned edges engage their reception grooves in the barrel and the overlying ring embraces the rearmost edge of the nib pressed into the groove, or parts of this edge so treated, a secure and rigid attachment of the nib is obtained. The container bore of the barrel will continue down into this end section and one or more small feed passages may lead from the bore to a feed groove cut down the exterior of the barrel where it will lie below the usual divided end portion of the nib and continue above such portion as is usual with the feed groove down a feed bar in existing constructions. This construction of the barrel and the nib can be used with any form of filling mechanism of the pen, but if a self-filling vacuum or suction tube is provided within the barrel this tube will continue down the container bore into the end of the barrel and communicate with a passage in the forward end of this part leading into the feed groove on the surface of the barrel below the nib.

In some cases, especially where the attachment ring is used in conjunction with inturned side edges on the nib, we may omit the part of the rear face carried below the ring in the annular groove of the barrel, and merely turn this rear edge over the front edge of the groove and fit a ring against it within the groove of the barrel. Any other convenient attachment means between the nib and the surface of the barrel may be employed. The attachment ring may be provided with any ornamental finish such as knurling or the like, to give a good appearance and also to enhance the grip of the fingers on this part of the pen. It may also be adapted to carry the ordinary cover piece or cap for enclosing the nib, and carry a spring tongue for anchoring it in a pocket or holder. For the purpose of attaching the cover piece or cap, part of the outer surface of the ring may be screw threaded, or may be provided with projections or angle grooves to co-operate with complementary parts in the cap to form a bayonet-like connection therefor.

This invention permits the production

[Price 1/-]

of fountain pens complete with nib conforming to one smooth unbroken contour; it enables an accurate and effective assembly to be made without presenting difficulties such as the making of joints, to the operative; it provides short feed passages and thus eliminates congealing of ink and consequent reduction of flow often found in the case of long feedways down the usual feeding bar, and it allows a greater portion of the fountain pen

barrel to be used as an ink reservoir. The unitary barrel construction provided by the invention in addition to eliminating screwed and other detachable joints with their consequent troubles and weaknesses simplifies manufacture as well as assembly.

Dated the 11th day of July, 1944.
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Chartered Patent Agents,
75 & 77, Colmore Road, Birmingham, 3.

COMPLETE SPECIFICATION

Fountain Pens

We, WYVERN FOUNTAIN PEN COMPANY LIMITED, a British Company, of Woodboy Street, Leicester, and MARK SYDNEY FINBURGH and WILLIAM THOMAS HIGGINS, both British Subjects, and both of the Company's address, 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 relates to fountain pens and more especially to the mounting of the pen thereof.

The invention in its broad aspect consists in a fountain pen comprising an ink-containing barrel extended forwardly below a pen nib externally mounted upon it and providing means for supplying ink to said nib, the nib including a rear portion which is clamped to the barrel and having means providing engagement between its sides and the barrel.

It is preferred in making a pen in accordance with the present invention that the barrel shall extend in one piece from the rear end, where a separate closure is fitted, for practically the full length of the pen and that a feed passage or passages shall be provided in its front portion where the nib is secured direct to this end of the barrel. There is thus no separate nib section of the barrel and no separate feed bar, and the contour desired for the barrel may continue to the front end of the pen. A completely external mounting of the nib on the barrel is preferred but a shallow recess may if desired be provided to receive the nib and give a flush mounting.

While the most usual method at present known is to secure a separate nib section in the barrel and to secure the nib in this section, or between it and a feed bar inserted in the section, the nib is sometimes secured in the end of the barrel which is completed by a separate feed bar which is inserted in the end of the barrel. This

avoids a joint on the outer surface of the barrel, but makes a break in the contour where the barrel ends and the feed bar projects under the nib.

The appended drawings illustrate a preferred constructional embodiment of the invention.

Figure 1 is a side elevation of the pen barrel and nib.

Figure 2 is a plan thereof.

Figure 3 is a section along the centre line of Figure 2.

Figure 4 is a cross section at A of Figure 1.

Figure 5 is a cross section at B of Figure 1.

Figure 6 is a cross section at C of Figure 1.

Figure 7 is a detail section of a modification.

In these drawings 10 is the barrel the rear part of which may be made on any approved lines. 11 is the front end or nib-receiving part of the barrel; 12 is part of the ink container, 13 is a passage from the container to a feed groove 14 and 15 is the pen nib.

In the convenient embodiment of construction illustrated in Figures 1 to 6 the end 11 of the barrel 10 which is to receive the nib 15 is provided with an annular groove 16 or a flat bottomed recess and part of the rear end of the nib 15 is complementarily formed as at 17 so that it will fit in and around a portion of this groove or in the recess whereupon it is overlaid by a metal attachment ring 18. The nib 15 is given a shape conforming with that of the end of the barrel and its side edges between the points 19 and 20 Figures 1 and 2 are inturned as at 21 to enter grooves or engage longitudinal abutments formed on opposite sides of the end of the barrel. By this means when the inturned edges 21 engage their reception grooves in the barrel and the overlying ring 18 is swaged down to reduce it and clamp it on to the rearmost

edge 17 of the nib which is pressed into the groove a secure and rigid attachment of the nib is obtained. The container bore 12 of the barrel will continue down into this end section and communicate with one or more small supply passages 13 leading to the nib feed groove 14. The feed groove is cut down the exterior of the barrel where it will lie below the usual divided end portion of the nib and continue above such portion as is usual with the feed groove down a feed bar in existing constructions. This construction of the barrel and the nib can be used with any form of filling mechanism of the pen, but if a self-filling air pipe or suction tube 22 is provided within the barrel this tube will continue down the container bore into the end of the barrel and communicate with a passage 23 in the forward end of this part leading into the feed groove on the surface of the barrel below the forward part of the nib so that it can be immersed in ink for the filling operation in the ordinary way.

In some cases we may omit the part 17 of the rear edge carried below the ring 18 in the annular groove 16 of the barrel, and merely turn this rear edge over the front edge of the groove as at 24 Figure 7 and fit a ring 18 against it within the groove of the barrel. Any other convenient clamping means between the rear of the external nib and the surface of the barrel may be employed. The engagement between the side portions of the nib and the barrel may be carried out by making the circumferential dimension of this part of the nib more than one half the corresponding dimension of the barrel over which it is fitted.

The attachment ring may be provided with any ornamental finish such as knurling or the like, to give a good appearance and also to enhance the grip of the fingers on this part of the pen. It may also be adapted to carry the ordinary cover piece or cap for enclosing the nib, and may carry the usual spring blade or tongue provided on fountain pens for securing the pen safely in the pocket of a garment or in a case or holder. For the purpose of attachment of the cover piece or cap part, the outer surface of the ring may be screw threaded, or may be provided with projections or angle groove to co-operate with complementary parts in the cap to form a bayonet-like connection therefor.

This invention permits the production of fountain pens complete with nib conforming to one smooth unbroken contour; it enables an accurate and effective assembly to be made without presenting difficulties, such as the making of joints,

to the operative; it provides short feed passages and thus reduces the liability of ink congealing therein and consequently reducing the flow, which is often present where the feedways are long as with the usual feeding bar, and it allows a greater portion of the fountain pen barrel to be used as an ink reservoir. The unitary barrel construction provided by the preferred construction eliminates screwed and other detachable joints with their consequent troubles and weaknesses, and simplifies manufacture as well as assembly.

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. Fountain pen comprising an ink-containing barrel extended forwardly below a pen nib externally mounted upon it and providing means for supplying ink to said nib, the nib including a rear portion which is clamped to the barrel and having means providing engagement between its sides and the barrel.

2. Fountain pen as claimed in Claim 1 in which the rear portion of the pen nib is clamped by an endless metal ring passed over it and onto the barrel and swaged to the barrel.

3. Fountain pen comprising an ink-containing barrel including a nib-carrying part, which latter is provided with means for supplying ink to the underside of an externally mounted pen nib, the barrel being formed with an annular groove around it at the rear of the nib, and the nib having means at its sides for engaging the barrel and being formed at the rear end with a portion which enters the said groove so that an encircling member, arranged in the groove, clamps the portion of the nib therein.

4. Fountain pen comprising an ink-containing barrel made in one continuous piece from a closure at one end to the nib-receiving end and provided at the part where the nib is to be attached with an ink passage located below the nib and with means for feeding ink thereto, the rear end of the nib behind the said ink passage being depressed and caused to enter a recess arranged around the barrel at this part and a clamping ring being secured in the said recess in such a manner as to clamp the nib, and the nib further having inturned side edges for engaging longitudinal grooves in the barrel.

5. A fountain pen as claimed in any preceding claim in which the rear part of the pen nib has a circumferential dimension which is more than half the

corresponding dimension of the barrel over which it is fitted.

- 5 6. A fountain pen as claimed in Claim 3 or Claim 4 in which the recess in the barrel is a shallow flat bottomed recess and the rear edge of the nib is formed with a depressed flat portion for fitting into the recess and receiving upon itself the clamping encircling member.
- 10 7. A fountain pen as claimed in Claim 1 in which portions of the sides of the barrel on which the nib is secured present longitudinal abutments which are engaged by inturned flanges on portions of the

side edges of the nib behind the pointed end. 15

8. A nib, for a fountain pen as claimed in any preceding Claim, which nib is so shaped that it can be fitted externally on the end of the barrel and has means 20 along its sides and at the rear end for engaging means on the pen barrel.

Dated this 29th day of June, 1945.

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The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies,
price 1s. 0d. each (inland) 1s. 1d. (abroad) may be obtained.

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

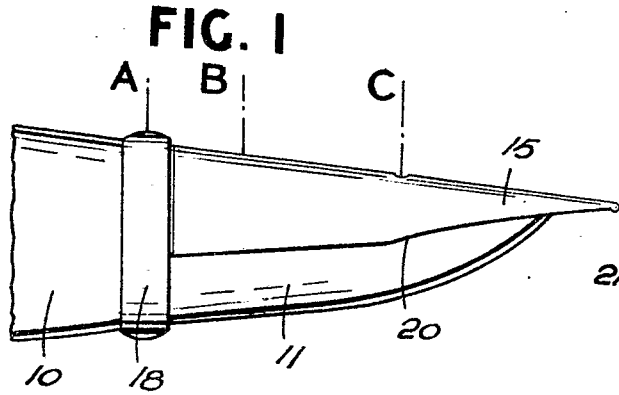


FIG. 4

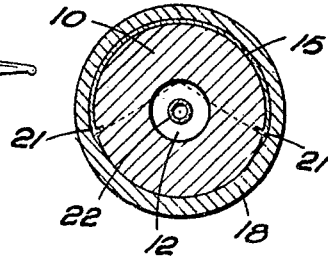


FIG. 2

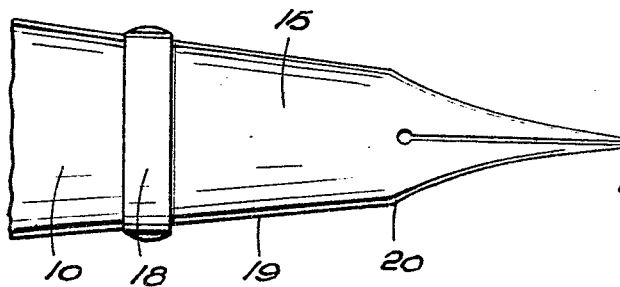


FIG. 5

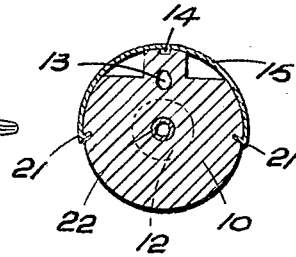


FIG. 3

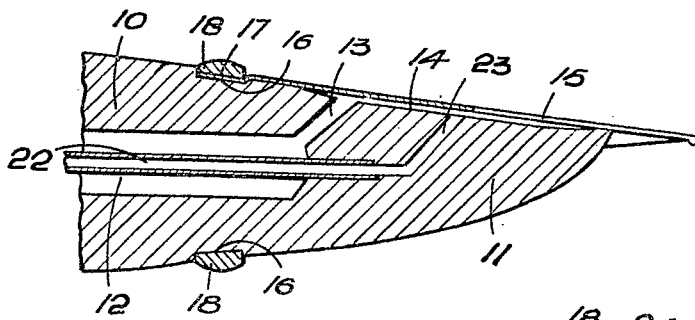


FIG. 6

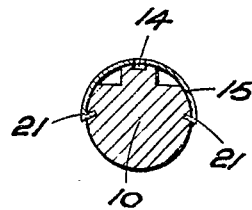


FIG. 7

