PATENT SPECIFICATION

656,673

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COMPLETE SPECIFICATION

Improvements in Nib Sections for Fountain Pens.

We, MABIE TODD AND COMPANY LIMITED, of Swan Works, Whitby Avenue, Park Royal, London, N.W.10, a Company organised under the laws of Great Britain and Northern Ireland, and EDWARD STEPHEN SEARS, of 23, Oaklands, Avenue, Watford, Hertfordshire, a British Subject, 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 nib sections for fountain pens and has for its chief object the provision of an improved nib section of simple construction and capable of being easily assembled with the minimum of skill and in particular to provide a nib section in which the nib can be interchanged by the user in a simple and expeditious manner with a certainty that the nib will be correctly positioned in relation to the feed bar and holder of the nib section.

According to the present invention a nib section for a fountain pen comprises a tubular holder, a feed bar and nib having a smooth shank, said holder having a counter-sunk front end to fit a corresponding shoulder formed on the feed bar intermediate its ends, a shoulder on the nib formed by a reduction in the size thereof, the holder and the feed bar being provided with co-operating screw threads at their rear ends to clamp the nib in place with the shoulder thereon between the shoulder on the feed bar and the countersunk front end of the holder.

The screw connection between feed bar and holder is conveniently made at the inner end of the nib section.

In order that the invention may be clearly understood, reference is directed to the accompanying drawings wherein:

Fig. 1 is a side elevation of a nib section according to the invention;

Fig. 2 is a longitudinal section of Fig. 1;

Fig. 3 is a plan of the under side of Fig. 1;

[*Price* 2/-]

Fig. 4 is a section of the line IV—IV Fig. 2;

Fig. 5 is a plan and side elevation respectively of a nib to comply with the requirements of the present invention;

Fig. 6 is an under plan view of a feed bar according to the invention; and

Fig. 7 is a side elevation of Fig. 6 with a nib according to Fig. 5 in position for the two components to be introduced into the holder.

Referring to the drawings which illustrate a preferred construction of nib section according to the invention and which comprises three components namely, a holder or bush 8, a feed bar 9 and a nib 10, the three components when assembled form a nib section for introduction into the barrel of a pen as indicated in dot-and-dash lines at A Fig. 2.

The holder 8 is formed with a shank 11 for attachment in the barrel of the pen and this attachment may be by a push fit or screw thread, a reduced portion 11^a terminating in a bead 12 for the attachment of a sac if the nib section is to be used with the self-filling type of pen. The holder is tubular and has a main bore 13 countersunk as at 14 at the front end into which the nib 10 and feed bar 9 are introduced, the main bore 13 being adapted to accommodate the back end of the nib and part of the feed bar. The main bore is reduced as at 15 to provide a secondary bore adapted to accommodate the remainder of a reduced part 21 of the feed bar, with a light frictional fit.

The end of the feed bar 9 remote from the nib 10 has a screw threaded part 16 to engage a correspondingly interiorly screw threaded part 17 formed in the end of bore 15 whereby the holder 8 and feed bar are attached one to the other.

The front end 18 of the fed bar 9 is of substantially conical form and a series of slots 19 producing baffles are cut on opposite sides to leave a central back-bone 20 on the underside of the forward part of

the feed bar. The rear part of the cone merges into the reduced portion 21 of the feed bar to form a stop or shoulder 22 which limits the inward movement of the feed bar and co-operates with the countersink 14 of the holder 8 to form a clamping means to hold the nib 10 in position when the feed bar and holder are screwed together by the threaded parts 16 and 17.

The top of the feed bar 9 has cut therein a longitudinal ink feed channel 23 or channels of suitable form and depth.

The nib 10 (see Fig. 5) is formed with a shank or stepped-down portion 24, the shoulder 25 so formed being of arcuate shape to conform with the shape of the shoulder part 22 of the feed bar 9. This shank portion of the nib is gradually enlarged to form the writing or slit part 26 of the nib which tapers toward the point, the angle conforming to the contour or taper of the conical part 18 of the feed bar 9 and culminating in conjunction with equal radials at the tip 27 of the nib. The nib 10 is slit as at 28 and formed with an air-hole 29 in the known manner. The shank portion 24 of the nib may be fitted to a correspondingly shaped recess provided in the reduced portion 21 of the feed bar; with this arrangement the bore 15 of the holder is not enlarged as shown at 13 in Fig. 2 and the nib and feed bar have a good fit within the bore. This arrangement reduces the chance of leakage from the back of the nib round the edge thereof.

When assembling the three components the feed bar 9 is positioned in the hollow or under side of the nib 10 and in alignment with the point, both nib and feed are then inserted in the holder 8 and screwed home until the parts 22, 25 and 14 come firmly together and clamp the nib 10 in place, the whole presenting a simple, straight forward method of assembling a nib section, and the replacing of a nib by unskilled hands in a satisfactory manner is achieved.

The external shape or contour of the nib section should conform with the general line of the pen and is shown with a taper whereby the appearance is enhanced, but may be arcuate or otherwise shaped according to requirements.

The invention has the further advantage that the construction lends itself not only to producing modern streamline effects, but from the shape of the nib and the support given thereto flexibility is given to the nib which ensures comfortable writing that a large or fairly large nib, with every movement of the point visible during writing, will give to the user; a larger nib flexible under the hand places less strain on the hand and arm during an extended period of use.

It will be appreciated that the invention is not limited to the precise construction described as the shape of the nib, feed bar and holder may differ from the streamline effect achieved; the ink duct and "laddering" of the feed bar may be modified and the terminal screw-threaded end of the feed bar shaped to meet the needs of both self-filling and non-self-filling pens.

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 nib section for a fountain pen comprising a tubular holder, a feed bar and a nib having a smooth shank, said holder having a countersunk front end to fit a corresponding shoulder formed on the feed bar intermediate its ends, a shoulder on the nib formed by a reduction in the size thereof, the holder and the feed bar being provided with co-operating screw threads at their rear ends to clamp the nib in place with the shoulder thereon between the shoulder on the feed bar and the countersunk front end of the holder.

2. A nib section for fountain pens according to Claim 1 wherein the front of the bore of the holder is made of larger diameter than the rear end of the bore to accommodate the shank of the nib.

3. A nib section for fountain pens according to Claim 1 wherein the feed bar is recessed to accommodate the shank of the nib.

4. A nib section for fountain pens substantially as herein described with reference to the accompanying drawings.

5. A fountain pen having a nib section constructed and adapted to function substantially as herein described with reference to the accompanying drawings.

Dated this 27th day of September, 1948.

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Fig. 1.

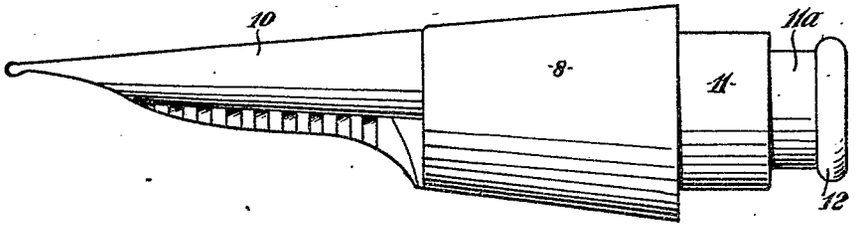


Fig. 2.

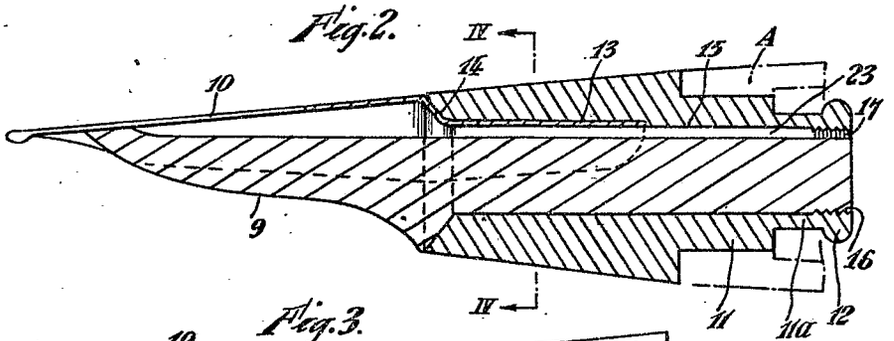
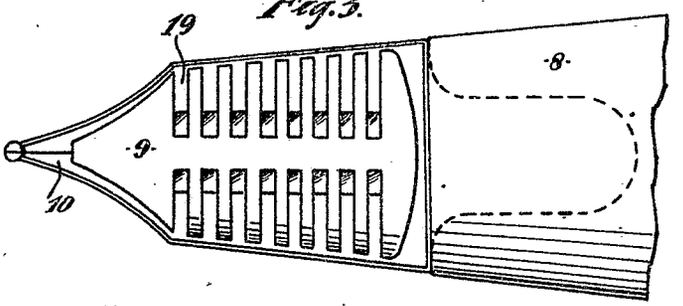


Fig. 3.



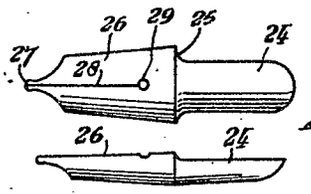


Fig. 5.

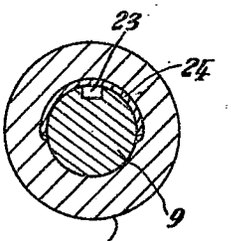


Fig. 4.

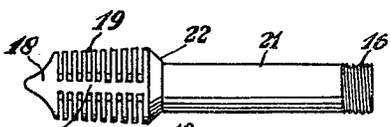


Fig. 6.

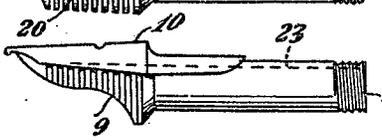


Fig. 7.

H.M.S.O. (M.F.P.)