June 17, 1947. B. W. HANLE 2,422,351

FOUNTAIN PEN

Filed Dec. 23, 1943

Fig. 1.

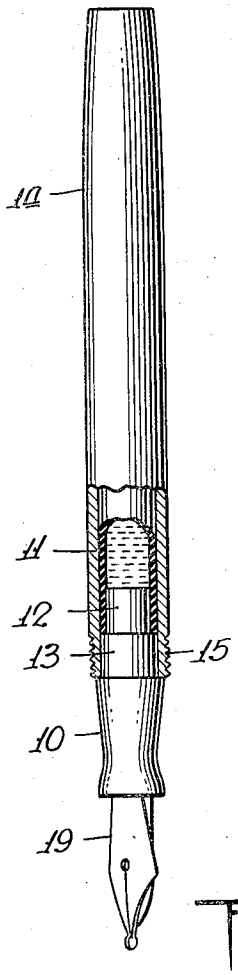


Fig. 2.

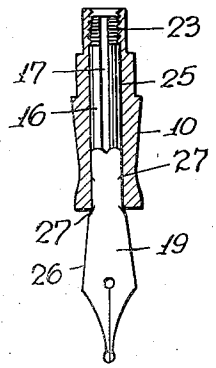


Fig. 3.

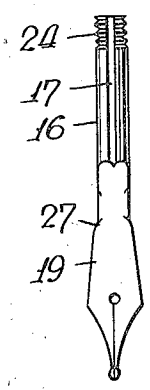


Fig. 4.

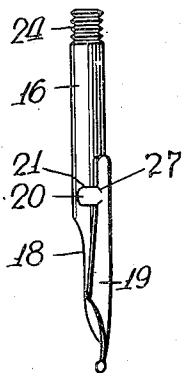


Fig. 5.

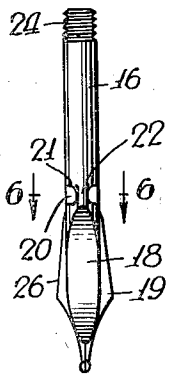


Fig. 8.

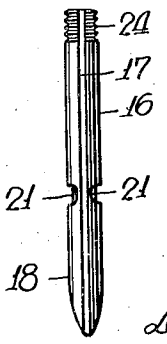


Fig. 6.

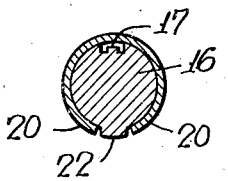
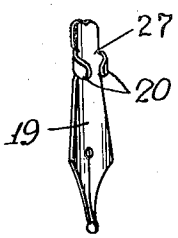


Fig. 7.



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Patented June 17, 1947 2,422,351

UNITED STATES PATENT OFFICE

2,422,351

FOUNTAIN PEN

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Application December 23, 1944, Serial No. 569,484

4 Claims. (Cl. 120—52)

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The present invention related to fountain pens and more especially to the feed and nib construction thereof.

It is an object of the invention to provide a simple, inexpensive yet thoroughly efficacious construction by which the desired pen nib may be introduced and readily replaced by the user, without the need for tools or expert care, with assurance of proper centering and secure mounting of the pen nib in place and without the likelihood of excess or deficiency in the feed of ink when thus installed.

In the accompanying drawings in which is shown one of various possible embodiments of the several features of the invention,

Fig. 1 is a side view partly in longitudinal section of the complete pen,

Fig. 2 is a view partly in longitudinal cross-section of the section with the feed and nib assembly in place therein,

Fig. 3 is a front elevation of the feed and nib assembly,

Fig. 4 is a side elevation thereof,

Fig. 5 is a rear elevation thereof,

Fig. 6 is a view in transverse cross-section on a larger scale and taken on line 6—6 of Fig. 5,

Fig. 7 is a perspective view of the nib, and

Fig 8 is a front elevation of the feed.

Referring now to the drawings, there is shown in Fig. 1 a generally conventional section 10, illustratively equipped with a rubber sac 11 upon its reduced inner end 12 and friction fitted at its root 13 in the forward end of the barrel 14 which is threaded at 15 for mounting the cap (not shown).

Removably fitted in the section is the feed and nib assembly shown in the other views of the drawings. The feed is a generally cylindrical rod 16 of vulcanite or plastic having the conventional longitudinal ink and air groove 17, symmetrically of the conventionally tapered and flattened forward end 18 thereof. The nib 19 has integral lateral wings 20 which partially embrace the feed 16 and are keyed thereto or countersunk therein, preferably by lodging the same with fairly snug fit in corresponding shallow, lateral depressions 21 in the feed, the adjacent ends of which are separated by bridge 22. The nib is therefore effectively locked with respect to the feed, both against longitudinal and rotational displacement.

Means is provided for removably affixing the nib and feed assembly within the section. Preferably the root end of the section is tapped at 23 and the inner end of the feed is correspondingly threaded at 24, so that the said feed and nib assembly may be removably threaded into the section as best shown in Fig. 2. As there shown, the bore 25 of the section is somewhat larger than the diameter of the feed rod 16, the feed being securely held at its rear end by its threaded root 24 and at its forward end by the clamping engagement of the nib 19 against the section. Desirably the lateral edges 26 of the pen nib flare outwardly as shown and the metal of the nib is slightly indented at 27, at both sides of, and, immediately adjacent the lateral wings 20 so that the roots of the wings are not at but inward of the corresponding lateral edges of the nib, and the effective length of said wings is correspondingly increased with correspondingly more effective grip thereof about the feed. With the feed and nib assembly in place as shown in Fig. 2, the thread 24 seats in tap bore 23 and the forward edge of the section 10 exerts a wedging or clamping action against the flaring side edges 26 of the nib 19, pressing the latter securely against the feed 16 in position located by the lower pair of indentations 27. There is therefore no looseness and no leak and the parts are kept in the optimum relationship for writing.

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When the nib is to be replaced, the user simply grasps the pen and nib assembly and unscrews it from the section 10, replacing it by a new pen and nib assembly which is sold as an article of manufacture for such replacement purposes.

Thus the dealer need keep in stock merely a supply of various assorted pen nibs, each preassembled with a feed and a supply of barrel and section assemblies of the sac, the plunger or other conventional type. The purchaser may then select that barrel and that nib which meet his taste and requirements and assembles them by hand in a few seconds.

When the nib is to be replaced, it is merely necessary to purchase an additional feed and nib assembly which may be readily threaded into the section after removal of the worn unit.

As many changes could be made in the above article and many apparently widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention what I claim as new and desire to secure by Letters Patent in the United States is:

1. In a fountain pen, a section having a bore

tapped at its inner end, a feed and nib assembly of diameter slightly smaller than that of the bore, the feed being removably threaded at its inner end into said tapped portion, said feed having longitudinal ink and air feed grooves extending the length thereof and having a pair of shallow lateral depressions symmetrically of the grooves and said nib having a triangular point end and a shank, the latter with integral lateral wings spaced from the opposite ends of said shank partially embracing said feed and lodged in said lateral depressions, the side edges of the shank flaring laterally outward from in front of the lateral wings, the roots of said flaring edges being wedged against the end of the section to clamp the nib against the feed.

2. In a fountain pen, a section, a feed and nib assembly, including a nib with a shank having lateral wings spaced from the opposite ends of said shank and embracing and keyed to the feed, the side edges of said shank flaring laterally immediately beyond said lateral wings, said edges being wedged against the feed by the outer end of the section when the feed and nib assembly is in place within the section, and means releasably locking the inner end of said feed and nib assembly in position within the section.

3. As an article of manufacture a fountain pen feed and nib assembly, said assembly comprising a generally cylndrical feed rod threaded

at its base and having a longitudinal ink and air groove, shallow lateral depressions located symmetrically of said groove, a bridge separating the adjacent ends of said depressions, and a nib with a shank having integral lateral wings spaced from the oppostie ends of said shank and partly embracing said feed rod and lodged in said depressions, said shank having outwardly flaring side edges beyond the lateral wings thereof and being slightly indented at the roots of said flaring edges for location of the nib relative to a section mounting said assembly.

4. The fountain pen feed and nib assembly as claimed in claim 3 in which, in addition to the slight indentations at the roots of said flaring edges at the corresponding side of each lateral wing, the shank of the nib has a corresponding slight indentation at the other side of each lateral wing.

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