Dec. 19, 1933. E. S. WOOD 1,939,753

FOUNTAIN PEN

Original Filed Nov. 19, 1928

Fig.1.

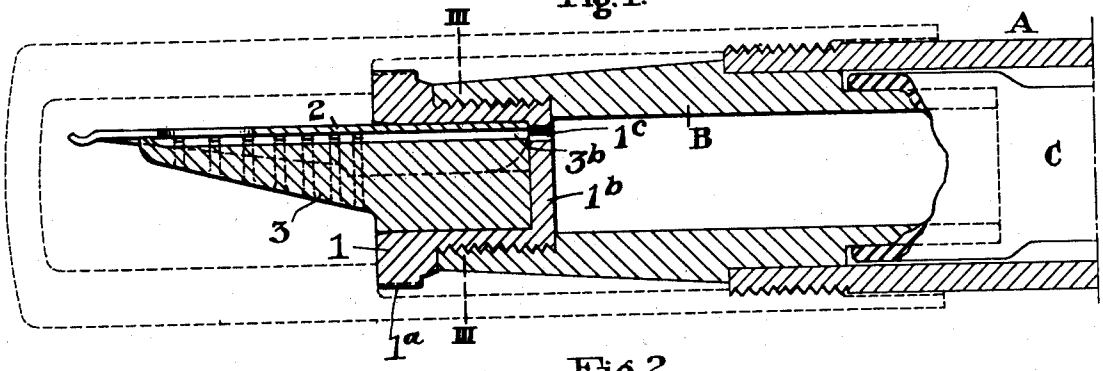


Fig.2.

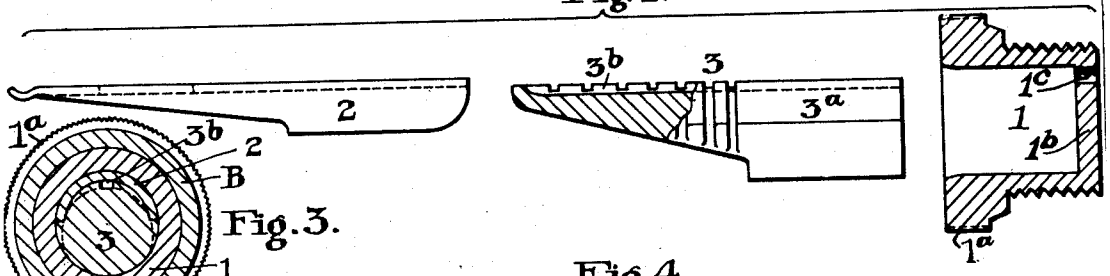


Fig.3.

Fig.4.

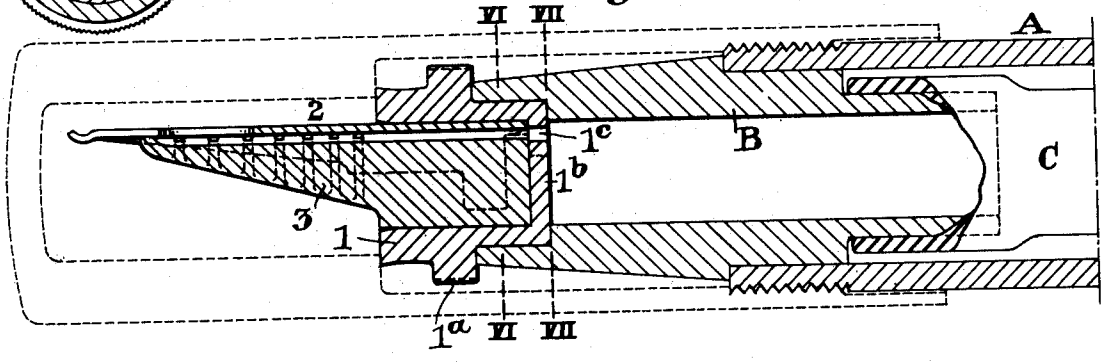


Fig.5.

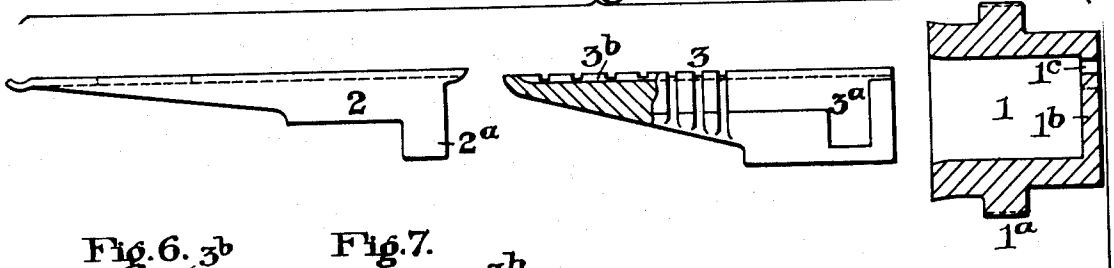


Fig.6.

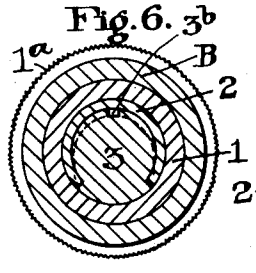
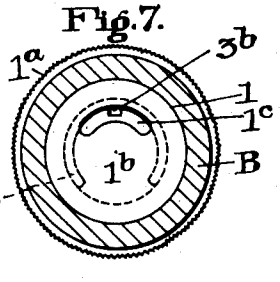


Fig.7.



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UNITED STATES PATENT OFFICE

1,939,753

FOUNTAIN PEN

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Application November 19, 1928, Serial No. 320,502
Renewed March 8, 1933

8 Claims. (Cl. 120—52)

My invention relates to fountain pens and the object of my invention is to provide means for renewing the pen nibs at slight expense, in order that nibs of the ordinary type, those made of steel and/or less expensive metals, may be employed instead of the more expensive gold nibs usually employed with fountain pens.

A further object of my invention is to provide simple and efficient means for replacing pen nibs in a fountain pen without damage to the latter or the nib or displacement of the nib with respect to the feeder member and without soiling the hands.

A further object of my invention is to provide a carrier or support for a pen nib and the feeder member employed therewith, which parts are associated in relatively fixed relationship for detachable connection with a pen barrel or a member carried thereby; such unit element being replaceable by a similar element carrying a pen nib when it is desired to renew the latter.

These and other features of my invention are more fully described hereinafter, reference being had to the accompanying drawing, in which:

Figure 1 is a view illustrating a fountain pen structure of a type to which my improvements may be applied;

Fig. 2 is a view illustrating the parts of the combination nib and feeder holding element which may be employed in the form of structure shown in Fig. 1;

Fig. 3 is a sectional view on the line III—III, Fig. 1;

Fig. 4 is a view similar to Fig. 1, illustrating another structure within the scope of my invention;

Fig. 5 is a view similar to Fig. 2, showing the separate parts of the structure embodying that form of my invention illustrated in Fig. 4, and

Figs. 6 and 7 are sectional views taken on the lines VI—VI and VII—VII, respectively, Fig. 4.

The usual fountain pen, in almost universal use, is one provided with a gold nib having a substantially fixed position at the end of the pen barrel and associated with a feeder of suitable character. It has been proposed and fountain pens have been developed which employ as nibs the ordinary steel or similar pens of commerce which, hitherto, have not usually been employed as the nibs of fountain pens.

In the use of these nibs made of metal other than gold or its alloys, it is necessary to renew them at intervals, depending upon the wear. As ordinarily constructed, it is a rather messy operation to change the nibs of fountain pens with the additional difficulty that as the nib and feeder are independent members and should have a certain adjustment for proper use of the pen, it is somewhat difficult to insure the desired relation when inserting the separate nib and feeder in the tubular cap at the end of the pen barrel which, in the present types of fountain pens, carries a rubber ink bag.

With a view of overcoming these difficulties in the use of fountain pens which require renewal of their nibs at intervals, depending upon wear of the same, I have devised means whereby a new nib may easily and quickly replace an old nib and without soiling the fingers. For this purpose my invention comprises a unit element consisting of a support which may be inserted in the bore at the end of the pen barrel or the bore of the part which carries the ink bag; such support carrying or constituting the feeder member, and a nib which is mounted in and/or fastened to such support and accurately associated with the feeder to insure proper cooperation of such parts in order that they may perform the duty for which they are intended.

In the drawing A represents the usual barrel of a fountain pen, receiving a tubular cap B, which carries the usual ink bag C, employed with modern fountain pens. In the usual practice, this tubular cap B receives the pen nib and the feeder associated therewith; such feeder member fitting the bore of the tubular cap very snugly and confining the end of the pen nib between its surface and the wall of said bore. In lieu of this arrangement, I propose to provide a detachable carrier for the nib and feeder which carrier, with the nib and feeder in fixed relationship, is insertible and removable as a unitary whole with respect to the tubular cap B.

My improved attachment is shown in the position of use in Figs. 1 and 4, and may comprise a carrier 1, a nib 2 inserted therein, and a feeder member 3 which may be of any suitable type and which occupies the space between the pen nib and the wall of the carrier; the three elements being maintained in exact coordination and comprising an insertible unit that may be sold with and for application to pens of a construction receiving the same. My improved unit element is of a character permitting separation from the rest of the pen structure quickly and without soiling the fingers, whereby a fresh carrier with nib and feeder in proper association may be quickly applied. To facilitate removal

and replacement, the detachable shell may have a knurled flange 1^a.

The feeder member may be of any approved type, and it may be in clamped relation with respect to the pen nib before the latter is inserted in the carrier; the pen nib shown in Figs. 4 and 5 having wings 2^a arranged to embrace the body of the feeder which may be recessed for such purpose as indicated at 3^a. It will be understood, of course, that the arrangement of pen and feeder illustrated in Fig. 4 wherein the pen is shown as provided with wings clamping the feeder, may be employed in the form of carrier illustrated in Figs. 1 and 2.

The carrier 1 has a rear wall 1^b against which the feeder may abut; such wall having a curved slot 1^c, to register with the ink groove 3^b, and the dimensions of such slot may be such as to enable easy assembly of the parts with a fully open passage for the ink.

The connection between the carrier 1 and the pen barrel or the tubular cap B at the end of the pen barrel, may be of any suitable type within the range of fountain pen construction. It may be a threaded joint as indicated in Figs. 1 and 2, with one or a plurality of continuous, or interrupted, threads, or it may be a slip joint as shown in Figs. 4 and 5. Any form of connection that will insure the desired liquid tight closure between the inserted or applied part carrying the nib and feeder and the tubular cap carrying the ink bag is within the scope of my invention.

As may be readily understood, several of my improved nib carriers may be sold with a fountain pen of a construction designed to receive the same as articles of merchandise; similar carriers with any desired form of pen nib being also sold for application thereto, so as to provide replacements for the original structure.

While I have illustrated fountain pens of the type having collapsible ink bags which may be filled automatically upon retraction of collapsing means, I do not wish to be limited thereto and other forms of fountain pens, among which may be mentioned those filled by suction by the action of a piston member, may be equipped with the unit nib and feeder carrying member forming the subject of my invention.

It is, of course, within the scope of my invention to employ gold nibs in connection with the unit member I have devised, and the claims are intended to cover unit members for connection with the barrel of fountain pens containing ink supplying means, whether such nibs are of steel or of any other metal. In like manner, the feeder element may be of any type that will properly perform its function. It may be entirely different from the form of feeder disclosed, which representation is more or less diagrammatic and is intended to indicate means for performing a function rather than the member that will be actually employed for such purpose.

I claim:

1. The combination with a fountain pen structure comprising a barrel and a tubular cap therefor carrying the usual ink bag disposed within said barrel, of a detachable shell fitting the bore of said tubular cap and having an end wall, a pen nib carried by said shell, and a feeder member associated in fixed relation with said pen nib and positioned by the end wall of the detachable shell; said shell and its contained parts comprising a unit element insertible and removable as a whole with respect to said tubular cap.

2. The combination with a fountain pen structure comprising a barrel and a tubular cap therefor carrying the usual ink bag disposed within said barrel, of a detachable shell of cap-form with an apertured end wall fitting the bore of said tubular cap, a pen nib carried by said detachable shell and positioned by the end wall thereof, and a feeder member also disposed within said detachable shell in registry with said apertured end wall and associated in fixed relationship with said pen nib; said detachable shell with the pen nib and feeder member comprising a unit element insertible and removable as a whole with respect to said tubular cap.

3. The combination with the barrel of a fountain pen structure, of a cup-shaped shell detachably connected therewith, a pen nib and a feeder member associated in fixed relationship and disposed within said shell; said pen nib and feeder member being maintained in proper relative position by the end wall of said shell.

4. The combination with a fountain pen structure comprising a barrel having ink retaining and supplying means and a tubular cap closing the end of the same, of a detachable shell of cup-form fitting the bore of said tubular cap, a pen nib fitting within said detachable shell, and a feeder member also disposed within said detachable shell in fixed relationship with and retaining the pen nib in place; said feeder member and pin nib, extending to the end wall of the detachable shell and being maintained in proper relative position thereby and said end wall having an aperture communicating with the feeder member for the passage of ink; said detachable shell and its contained parts comprising a unit element insertible and removable as a whole with respect to said tubular cap.

5. The combination with a fountain pen structure comprising a barrel and a tubular cap therefor having a through bore and carrying the usual ink bag disposed within said barrel, of a detachable shell in threaded engagement with the bore of said tubular cap and having an end wall, a pen nib carried by said shell, and a feeder member associated in fixed relationship with said pen nib and positioned by the end wall of the detachable shell; said shell and its contained parts comprising a unit element insertible and removable as a whole with respect to said tubular cap.

6. The combination with a fountain pen structure comprising a barrel and a tubular cap therefor having a through bore and carrying the usual ink bag disposed within said barrel, of a detachable shell of cup-form in threaded engagement with the bore of said tubular cap; said shell having an apertured end wall, a pen nib carried by said detachable shell and positioned by the end wall thereof, and a feeder member also disposed within said detachable shell in registry with said apertured end wall and associated in fixed relationship with said pen nib; said detachable shell with the pen nib and feeder member comprising a unit element insertible and removable as a whole with respect to said tubular cap.

7. The combination with a fountain pen structure comprising a barrel having ink retaining and supplying means and a tubular cap having a through bore fitting the end of the same, of a detachable shell of cup-form in threaded engagement with the bore of said tubular cap, a pen nib fitting within said detachable shell, and a feeder member also disposed within said de-

tachable shell in fixed relationship with and retaining the pen nib in place; said feeder member and pen nib extending to the end wall of the detachable shell and being maintained in proper relative position thereby and said end wall having an aperture communicating with the feeder member for the passage of ink.

8. The combination with the barrel of a fountain pen structure, of a cup-shaped shell detachably connected therewith, a pen nib and a feeder member associated in fixed relationship and disposed within said shell. said pen nib and feeder member being longitudinally positioned by the end wall of said shell.

EDWARD S. WOOD.