

Fig. 1.

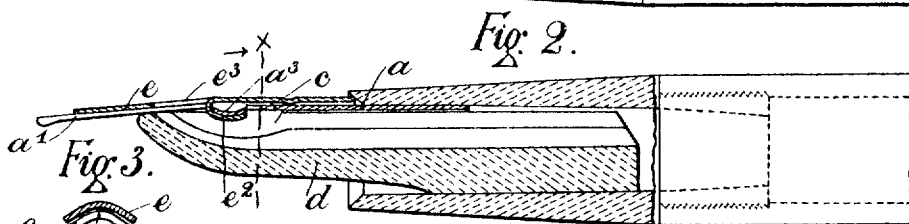


Fig. 2.

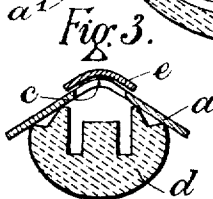


Fig. 3.

Fig. 4.

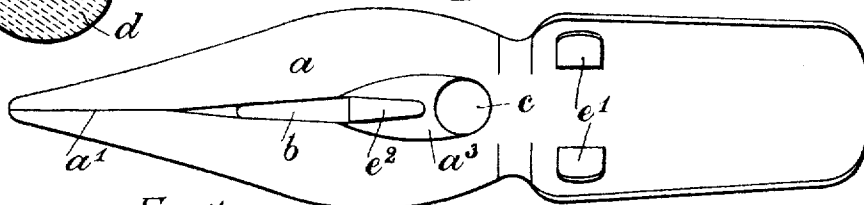


Fig. 5.

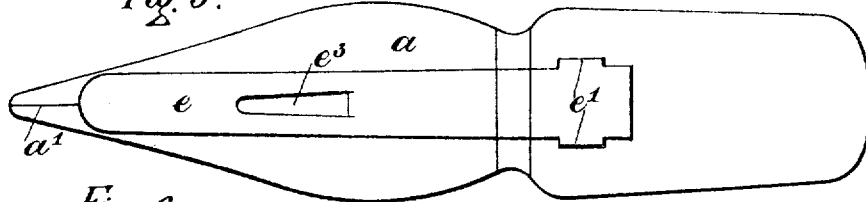


Fig. 6.

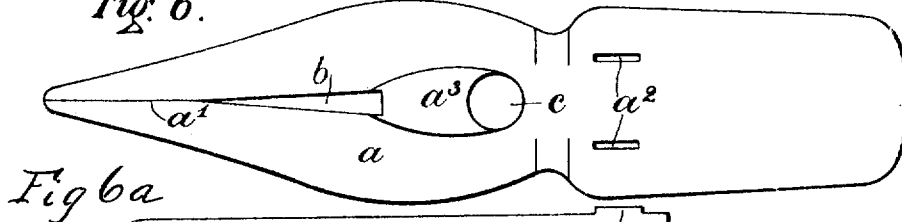


Fig. 6a

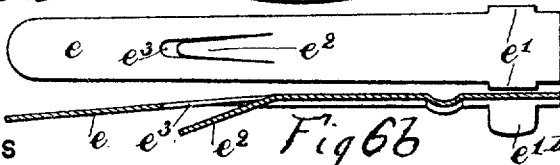


Fig. 6b

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 FOUNTAIN PEN NIB.
 APPLICATION FILED NOV. 28, 1908.

940,509.

Patented Nov. 16, 1909.

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Fig. 7.

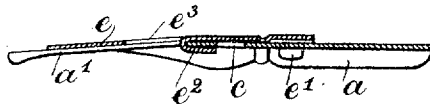


Fig. 8.

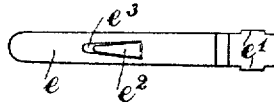
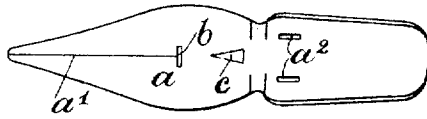


Fig. 9.

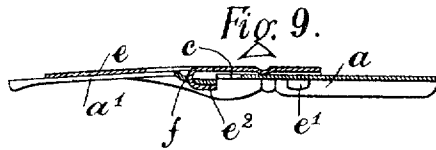
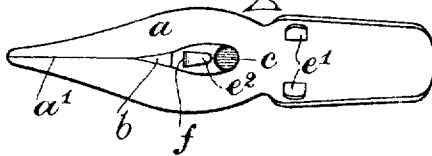


Fig. 10.



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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN NIB.

940,509.

Specification of Letters Patent. Patented Nov. 16, 1909.

Application filed November 28, 1908. Serial No. 464,817.

To all whom it may concern:

Be it known that I, DUNCAN CAMERON, a subject of the King of Great Britain, residing at Edinburgh, Scotland, Great Britain, have invented certain new and useful Improvements in Fountain-Pen Nibs, of which the following is a specification.

This invention relates to nibs for use in connection with fountain pens.

The usual methods of feeding or supplying the ink from the reservoir to the nib are either the underfeed or the twin-feed. In the former case a single grooved or channelled feed-bar is arranged along the underside of the nib and extends well forward under the slit and point, but with this method of feeding the ink, it is not possible to employ a flexible nib owing to the fact that the rising or yielding of the nib under the pressure of the hand in writing, would cause the underside to move away from the feed-bar, and thus the continuity of the ink-flow would be temporarily broken. In the twin-feed method, top and bottom bars are employed, the nib coming between them, but owing to the top-bar being comparatively rigid, it does not allow of the nib readily yielding to pressure and the only flexibility is that derived from the end of the nib forward of the top feed, and which is obtained by the wide-slitting of the points or by reducing the thickness of the metal.

The object of the present invention is to obviate these disadvantages, and to provide an improved form of nib and ink-feed device which is capable of being made exceedingly flexible, equal in fact, to the flexibility of any steel pen, and at the same time insuring a perfect and continuous flow of ink to the nib under all conditions, notwithstanding the extent to which the pen may yield when writing. This object it is proposed to attain by employing a flexible top feed-bar which is attached at its inner end to the body of the nib, and forming behind the ordinary pierce hole or slit of the nib, one or more independent piercings or openings leading from the channel or ink-duct in the bottom feed-bar to the underside of the top bar, by which means a much shorter under-bar can be employed. Thus when the nib yields to pressure, not only is the underside less liable to move away from the short feed-bar owing to the comparatively small angular movement made by the inner end of the nib-head but even if this should happen, the ink can

still flow through the auxiliary piercing or opening to the top feed-bar, which latter thus maintains the supply of ink to the pen.

Figure 1 of the accompanying drawings represents a pen nib in side elevation constructed in accordance with this invention, and shown as fitted to a fountain pen. This view shows the application of the invention to a nib having an ordinary pierce hole at the inner end of the slit. Fig. 2 is a longitudinal section through the nib and feed bar. Fig. 3 is a transverse section on line *a* Fig. 2. Fig. 4 shows an underside plan of the nib removed from the pen body. Fig. 5 is a top-side plan of said nib. Fig. 6 is a view of the nib with the feed bars removed therefrom. Fig. 6^a is a plan view of the top feed bar. Fig. 6^b is a longitudinal sectional view of the top feed bar. Fig. 7 is a longitudinal section showing the application of the invention to a nib, the point of which is slit without being provided with the ordinary pierce hole. Fig. 8 shows in plan said nib and the top feed bar separated from one another. Fig. 9 is a section of a modified form of nib. Fig. 10 shows same in underside plan.

The same letters of reference indicate corresponding parts in each of the figures of the drawings.

Referring to Figs. 1 to 6, the nib *a* is provided with a pierce hole *b*, and the point is slit at *a'* as usual. To the rear of the inner end of said pierce hole a piercing or aperture *c* is formed, which is quite separate and independent of said hole *b*, and is situated toward the rear of the head of the nib, so that the bottom feed-bar *d*, whose ink-duct extends under said aperture *c*, can be made considerably shorter than usual.

The top feed bar *e* consists of a long flexible tongue which covers said piercing *c*, and extends forwardly to or near the point of the nib, while the rear end is suitably secured to the shank or body of the nib by any suitable means, such as by a pair of ears *e'* at the opposite sides, which are passed through slits *a''* in said shank and clenched over on the underside, and so that the front end is left free and flexible whereby it can yield or flex itself in unison with the movements made by the point of the nib when the pen is in use. The top tongue *e* may be further secured by a small tongue *e''* at about the middle of its length which is passed through the pierce-hole *b* in the nib and

clenched over, said tongue e^2 being preferably formed out of the body of said tongue so as to leave the pierce hole e^2 . That portion of the nib between the pierce hole b and the aperture c may be slightly sunken or recessed, as at a^2 , so as to assist the flow of ink.

During ordinary writing the ink is supplied to the underside of the nib directly from the bottom feed-bar d , and also through the pierce hole b and auxiliary piercing or aperture c , or aperture c alone, to the underside of the top feed-bar e , from whence it is led along the slit of the nib to the point. Should now the nib be bent back from the under feed-bar due to the pressure of the hand, the direct flow to the underside of the nib and to the pierce hole b , will be temporarily arrested, but the ink will still continue to flow through the aperture c to the top bar, which keeps up the supply to the nib.

In the form shown in Figs. 7 and 8, the point of the nib is slit at a^1 without being provided with the ordinary pierce-hole. The aperture c is formed to the rear of the end of the slit, and is quite independent of the latter. The top feed e is secured by passing the tongue e^2 through a small hole b formed at the end of the slit, and clenching same on the underside of the nib.

As represented in Figs. 9 and 10, a special piercing f may be provided for receiving the tongue e^2 of the top feed bar e , said piercing f coming between the pierce hole b and the aperture c .

Having fully described my invention, what I desire to claim and secure by Letters Patent is:—

1. In a fountain pen, the combination with the barrel and lower feed bar, of a pen nib provided with a forward opening and a rear opening and an auxiliary upper feed bar having an intermediate tongue engaging the forward opening of the pen nib.

2. In a fountain pen, in combination, a lower feed bar, an upper feed bar and a pen nib provided with a forward opening and a rear opening supported between the feed bars, the upper feed bar having locking means integral therewith intermediate its length for locking engagement with the forward opening in said nib.

3. In a fountain pen, a nib having a forward elongated substantially triangular shaped opening and a rear independent feed opening and an upper feed bar having means to pass through the said triangular shaped opening to lock said nib and upper feed bar.

4. In a fountain pen, the combination with a lower feed bar and a nib having a forward opening and a rear opening, of an auxiliary feed bar in association therewith and provided with locking means engaging the forward opening in said nib.

5. In a fountain pen, in combination, a lower feed bar, an upper feed bar and an interposed nib having a slit terminating in an opening and having also an independent feed opening in its rear portion, the upper feed bar having an intermediate tongue which is engaged through the first opening.

6. In a fountain pen, in combination, a nib provided with two feed openings and with a slit extending from the forward opening, a lower feed bar extending under both openings and an upper feed bar overlying the nib and receiving ink from the rear opening.

7. In a fountain pen, in combination, a lower feed bar, an upper feed bar, and an interposed nib having a feed opening establishing communication between the feed bars and having a depression in advance of the feed opening.

8. In a fountain pen, in combination, a nib, a feed bar overlying the same, and means for supplying ink to the space between the feed bar and the nib, the latter having a depression to facilitate the flow of the ink.

9. In a fountain pen, in combination, a nib provided with two feed openings, with a slit extending from the forward opening and with a depression between the openings, a lower feed bar extending under both openings and an upper feed bar overlying the nib, extending over the rear opening and the depression, and receiving ink from the rear opening.

In testimony whereof I have hereto set my hand in presence of two subscribing witnesses.

DUNCAN CAMERON.

Witnesses:

JAMES GALLIE,
MALCOLM BLAIR.