N° 15,547 A.D. 1905

Date of Application, 29th July, 1905
Complete Specification Left, 21st Dec., 1905—Accepted, 1st Mar., 1906

PROVISIONAL SPECIFICATION.

"Improvements in a Certain Part of Fountain Pens"

I, DUNCAN CAMERON, Managing Director of MacNiven and Cameron Limited, Waverley Works, Blair Street, Edinburgh, do hereby declare the nature of this invention to be as follows:—

This invention has relation to the ink-feed bars of fountain pens, and has for one of its objects to provide a bar which is specially adapted for use in connection with nibs of the "Waverley" and similar patterns in which the blade or head inclines upwardly or rises at an angle from the stem and is separated therefrom by a neck or shoulder, whilst another is to construct the bar in such a manner that the capillary flow of the ink to the nib is moderated or checked and spillage or leakage and waste of the fluid is prevented.

The improved feed bar is made from ebonite or other suitable material and the shank or stem of the same is made of a circular or other section to fit into a corresponding hole in the end of the body of the pen, whilst the head or outer portion, which is designed to come underneath the blade of the pen-nib is pitched or inclined upwards to the same inclination as that of the particular "Waverley" or similar pattern of nib with which it is adapted to be used. The pitched-up head made of a half round section and its underside is bevelled or inclined from the pointed forward end down to its junction with the circular shank or stem, whilst the top side of the bar, immediately rearwards of the said pitched-up head, is formed with a transverse groove or indent to receive the shoulder or neck of the nib.

An ink duct or channel is cut along the topside of the stem of the bar and intersects the cross groove and is extended along the top side of the pitched up head to within a short distance of the point, so that the said cross groove which is shallower than the channel, is in communication with the latter and forms a receptacle for ink that may overflow from the same. Further receptacles for excess ink may be formed by cutting grooves or indents in the top of the bar, the same running parallel with and on either side of the ink duct or channel, and preferably terminate a short distance from the forward edges of the said head. These grooves, in conjunction with the cross channel, receive the excess ink from the principal duct or main channel and as they considerably increase the area over which the said ink can spread itself, they check or moderate the capillary flow and so prevent too much ink from being fed or delivered to the nib.

Dated this 28th day of July—05.

DUNCAN CAMERON,
By Henry Skerrett,
Agent for Applicant.

COMPLETE SPECIFICATION.

"Improvements in a Certain Part of Fountain Pens"

I, DUNCAN CAMERON, Managing Director of MacNiven and Cameron Limited, Waverley Works, Blair Street, Edinburgh, do hereby declare the nature of

[*Price* 8*d*.]

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 has relation to fountain-pen ink-feed bars or feed-pieces of that type in which a longitudinal ink-duct is formed along the top of the bar for conveying ink from the reservoir of the pen to the underside of the nib, and has for its principal object, to provide an improved bar of this type which is specially adapted for use in connection with nibs of the "Waverley" and similar patterns in which the blade or head inclines upwardly or rises at an angle from the stem and is separated therefrom by a neck or shoulder.

Figure 1 of the accompanying drawing represents a fountain pen fitted with an ink-feed piece or feed-bar formed in accordance with my invention for the purpose of realizing the object above referred to. This view shows the feed piece in elevation whilst the pen, which is of the "Waverley" pattern, is represented in longitudinal section.

Figure 2 is another view, which shows the ink-feed bar as well as the pen in longitudinal section.

Figure 3 is a side elevation of the improved ink-feed piece separately and

Figure 4 is a topside plan thereof.

Figures 5, 6, and 7 respectively represent cross sections of the feed-piece taken upon the dotted lines, x x^1 and x^2 Figure 4.

The same letters of reference indicate corresponding parts in the several figures of the drawing

The improved feed bar a is made from ebonite or other suitable material and the shank or stem a^1 of the same is made of a circular or other section to socket and fit into a corresponding open end b^1 of the reservoir body b of the pen, whilst the head or outer portion a^2 which is designed to come underneath and fit closely against the blade c^1 of the pen nib c is pitched or inclined upwards to the same inclination as that of the particular "Waverley" or similar pattern of nib with which it is adapted to be used. The pitched-up head is made of a half-round section and its underside is bevelled or inclined at a^3 from the pointed forward end down to its junction with the circular shank or stem, whilst the top side a^4 of the bar is rounded over or made of a convex section, to correspond to the concaved underside of the nib, whilst immediately rearwards of the said pitched-up head, it is formed with a transverse groove or indent a^5 to receive the shoulder or neck c^2 of the nib.

A continuous ink-way duct or channel a^6 is cut from end to end along the topside of the stem of the bar, so as to intersect the cross groove and this duct is extended along the top side of the pitched-up head to within a short distance of the point (see Figures 2 and 4) where its terminus forms a delivery outlet which comes under the pierce hole c^4 in the slit nib. The cross groove, which is shallower than the longitudinal channel, forms a receptacle for any ink that may overflow from the same, and further receptacles for excess ink may be formed by cutting one, two or more grooves, indents or trenches such as a^7, a^8, on the top of the bar, parallel with and on either side of the main ink duct or channel, and these supplementary receptacles preferably terminate a short distance from the forward edges of the said head. These grooves or trenches receive the excess ink from the principal duct or main channel and increase the area over which the said ink can spread itself.

If desired the area of the surface with which the ink comes in contact in passing along the duct may be increased by forming on the bottom of the said duct one or more ribs such as a^9; but this formation does not constitute part of my invention.

When the nib is inserted into the holder as shown in Figures 1 and 2, its transverse shoulder c^2 engages the cross groove a^5, whilst its head and shank cover the channel of the feed piece and becomes a lid to prevent the escape of ink from the feed-bar duct but it is not an ink-tight lid because there is an

opening at the pierce hole of the nib, and there are longitudinal and transverse grooves or interstices between the upper surfaces of the feed piece and the under surface of the nib and lastly, there is the cleft or slit between the points of the nib. Ink might escape through all or any of these spaces, but in practice, the escape of ink through the pierce hole is prevented by the natural action of adhesion of fluid to a solid, which in this case, is aided by atmospheric pressure.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

First:—In a fountain-pen ink-feed piece or feed-bar having a longitudinal ink-duct or groove adapted to be covered over by the nib of the pen; providing the said bar with a pitched-up or upwardly-inclined head, substantially as and for the purposes herein described.

Secondly:—An ink-feed piece or feed-bar for fountain pens, consisting of a stem or shank having an upwardly pitched or inclined head, a longitudinal ink-duct or channel extending from the stem to near the tip of the said pitched-up head, and a transverse groove or indent adapted to receive the shoulder of the nib, with or without supplementary longitudinal recesses or indents arranged upon the top side of the pitched-up head of the feed bar, substantially as, and for the purposes herein described.

Dated this 20th day of December 1905.

DUNCAN CAMERON,
By Henry Skerrett,
24, Temple Row Birmingham.
Agent for Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1906.

A.D. 1905. July 29. N° 15,547.
CAMERON'S Complete Specification.

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

Fig. 1.

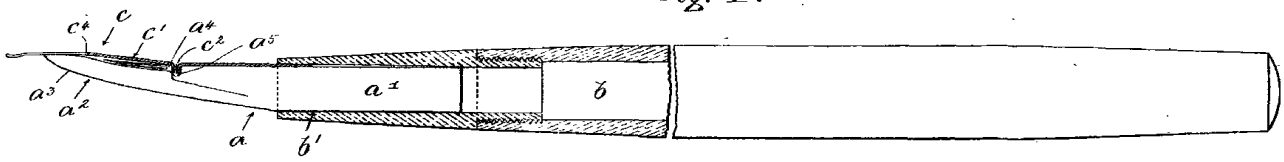


Fig. 2.

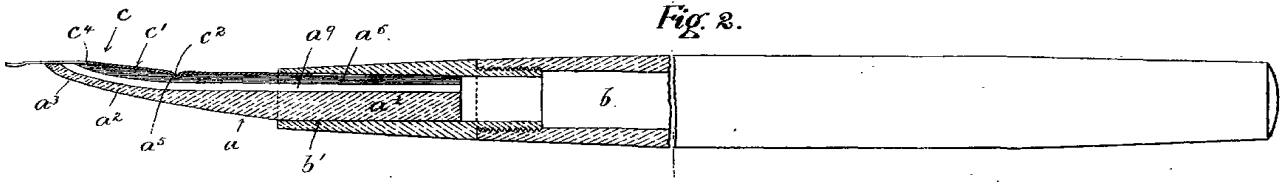


Fig. 3.

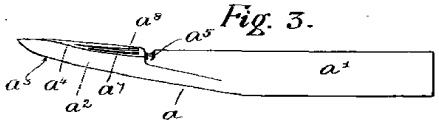


Fig. 4.

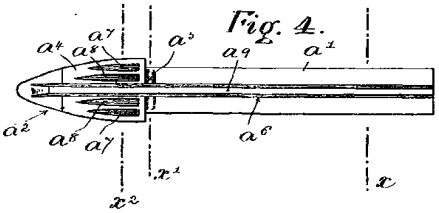


Fig. 5.

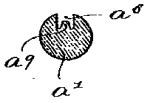


Fig. 6.

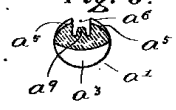
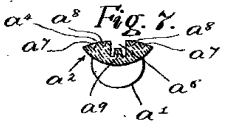


Fig. 7.



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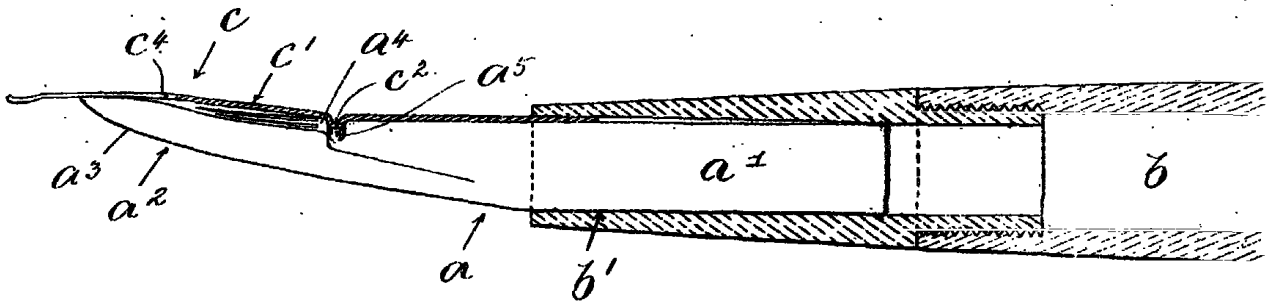


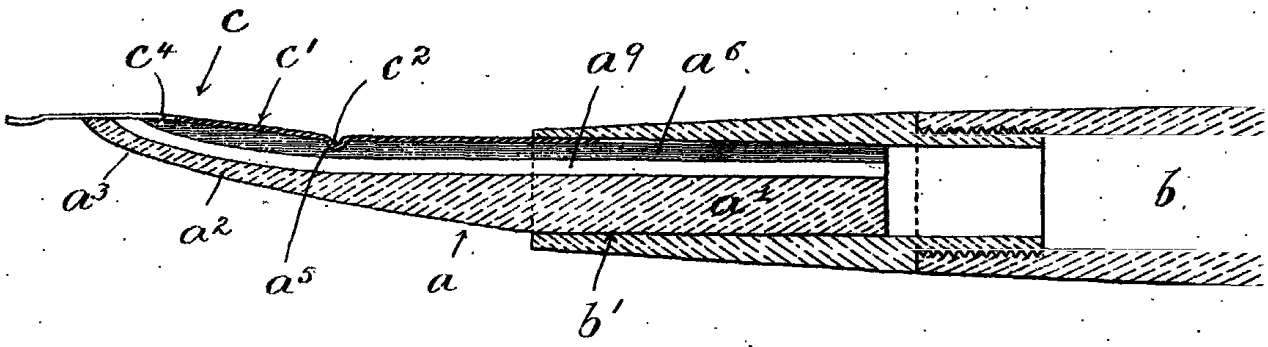


Fig. 3.

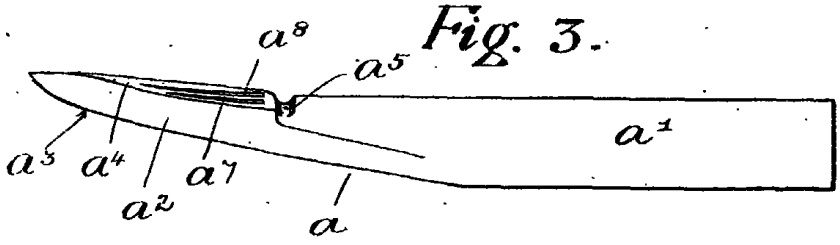


Fig. 5.

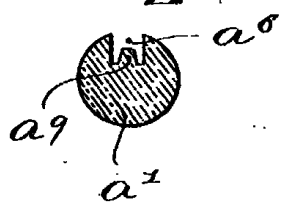


Fig. 4.

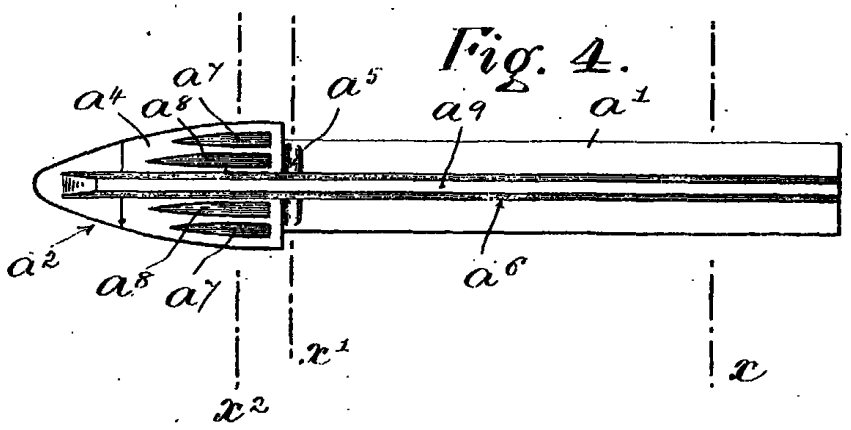


Fig. 1.

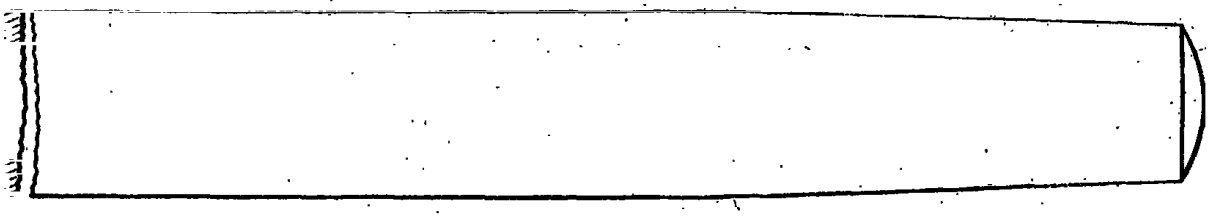


Fig. 2.

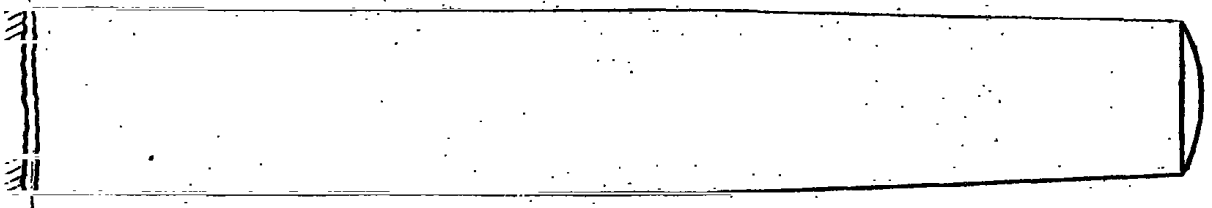


Fig. 6.

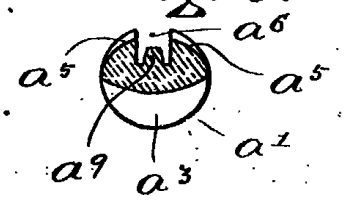
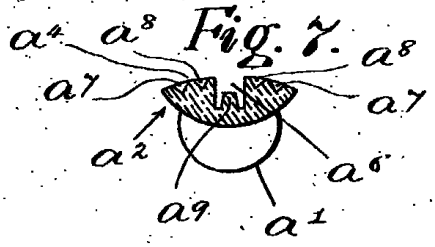


Fig. 7.



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