(No Model.)

A. M. SUTHERLAND & F. C. BROWN.

STYLOGRAPHIC FOUNTAIN PEN.

No. 266,064. Patented Oct. 17, 1882.

Fig. 1.

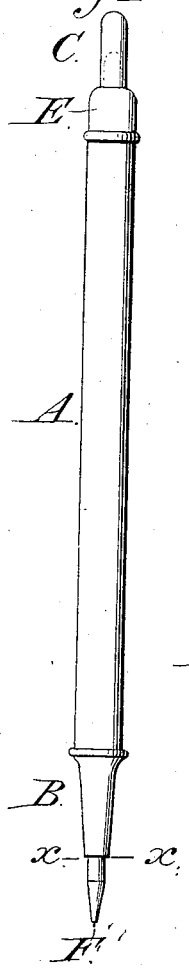


Fig. 2.

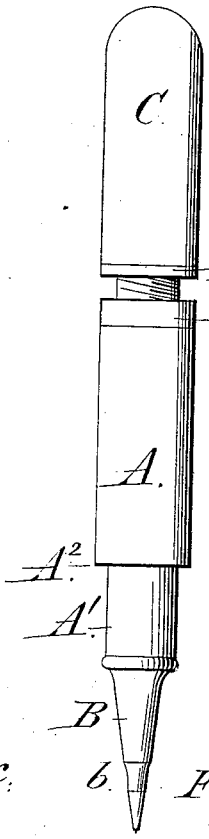


Fig. 3.

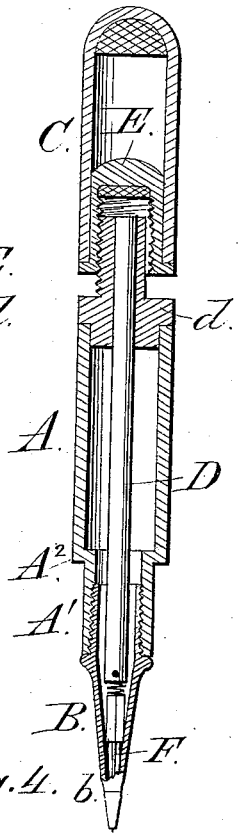


Fig. 5.

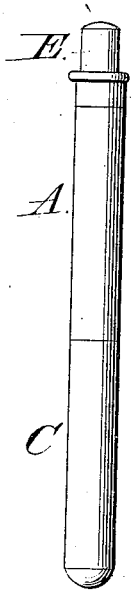
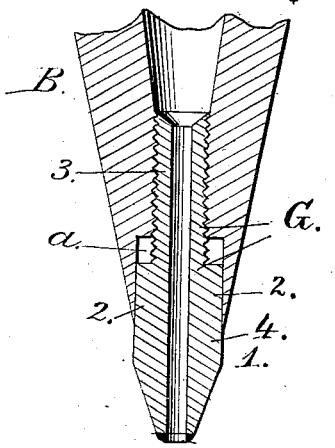
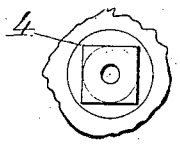


Fig. 4.





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UNITED STATES PATENT OFFICE.

ALEXANDER M. SUTHERLAND AND FRANCIS C. BROWN, OF NEW YORK, N. Y., ASSIGNORS TO THE MACKINNON PEN COMPANY, OF SAME PLACE.

STYLOGRAPHIC FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 266,064, dated October 17, 1882.

Application filed December 6, 1880. (No model.)

To all whom it may concern:

Be it known that we, ALEXANDER M. SUTHERLAND and FRANCIS C. BROWN, both citizens of the Dominion of Canada, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Stylographic Fountain-Pens; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of writing-instruments termed "stylographic fountain-pens."

The invention consists—

First, in a peculiar novel construction and arrangement of the several parts of the device that co-operate to form a practical working pen, as follows: The barrel is closed at its top end by a plug, which forms the head of the air-tube, and has a reduced shouldered lower end. The point-section containing the valve or point-clearer devices is made gradually tapering from top to point and without abrupt shoulders, and of less diameter than the shouldered end of the barrel into which it fits. The point-protector is of about the same diameter and length as the barrel, and the air-cap has no top extension, as heretofore, and is of the same diameter as the reduced end of the barrel, and receives the protector directly thereon, whereby the following useful results are accomplished: The weak portion of the point-section is strengthened, and the same is entirely protected when the pen is not in use. A proper length of handle for a writing-instrument is provided. The parts both in use and when closed present a smooth unbroken outline, thus advantages in its carrying and handling are secured. The usual small shouldered writing end and projection on top of air-cap are dispensed with.

Second, in a peculiar novel construction and arrangement of the writing-point, which is made adjustable in its bearings, all as and for the purposes hereinafter more fully described and claimed.

In the drawings hereto annexed, forming part of this specification, Figure 1 is a view of a long-sized or desk "MacKinnon pen," upon which the present invention, as illustrated in elevation in Fig. 2, is designed as an improvement. Fig. 3 is a longitudinal central sectional view of same; Fig. 4, a detached enlarged view of the writing-point, illustrating the mode of adjustment thereof; Fig. 5, a view showing the pen as closed and ready for carrying in the pocket.

A is the barrel; B, the point-section; C, the protector; D, the air-tube; E, the air-cap, and F the needle.

The barrel A is made very much shorter but of somewhat greater diameter than the barrel as ordinarily made. (Represented in Fig. 1.) One end of this barrel, at A′, is for a short distance reduced in diameter, forming a shoulder, A^2. The interior of this end A′ is screw-threaded to receive the point-section B. Within the top end of the barrel is received the head *d* of the air-tube D. Upon this head *d* is the air-cap E, made of such size as to just fit within the protector and hold the same secure when placed thereon.

It will be seen that the protector is received over and directly upon the air-cap, which is made to receive it, instead of upon a small projection formed and extending above the cap, as in the MacKinnon pen. Breakage of this part is by this means avoided, and a more pleasing outline given to the pen.

The point-section, instead of tapering nearly to the point and then terminating in an abrupt shoulder, as shown at *x x*, Fig 1, is made to taper gradually from top to point, the point *b* being of an increased diameter and without shoulders, as at *x x*, Fig. 1. By thus forming the point-section the weak portion is strengthened. Consequently the liability to break here is removed.

The writing-point of the pen is composed of a metal tube, G, formed, as shown in Fig. 4, with a head, 1, a portion of which, at 2, is made cylindrical and the front portion tapering to a point, which is tipped with a non-wearing material. A long finely screw-threaded part, 3, extends rearward from the head 1, which, when in position, enters corresponding screw-threads in the point-section. By unscrewing or screwing up this writing-point G, the proper protrusion of the needle from the pen-point is regulated.

Within the end of the point-section is formed

a recess, *a*, which receives the cylindrical part 2 of the writing-point. This said part 2 is made to fit close and tight within the recess *a* in the point-section to prevent leakage. When using this form of adjustable point the needle itself may have no means for or be vertically adjustable, except the slight vertical and lateral vibration usual, as has heretofore been the case. The adjustment of the needle can therefore be regulated without opening the pen.

On the head 1 of the writing-point is formed a key-head, 4, to receive a key for adjusting the writing-point, as shown in inverted plan at bottom of Fig. 4.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement, in a fountain-pen, of barrel A, closed at its top end by plug *d*, which forms the head of the air-tube D, and with reduced shouldered end A' A^2, point-section B, containing the valve mechanism, made gradually tapering from top to point and without abrupt shoulders, air-cap E, of equal diameter with the shouldered end A' of the barrel, and point cover or protector C, made of about equal length and diameter with the barrel, and adapted to fit upon the part A' of the barrel to protect the point when the pen is not in use, and upon the cap E to form an extension of the body when the pen is in use, all as and for the purposes hereinbefore described and shown.

2. In combination with the point-section formed with recess *a*, the writing-point G, formed with tapering writing part 1, cylindrical part 2, fitting within the recess *a*, and screw-shaft 3, as and for the purposes described.

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Witnesses:
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