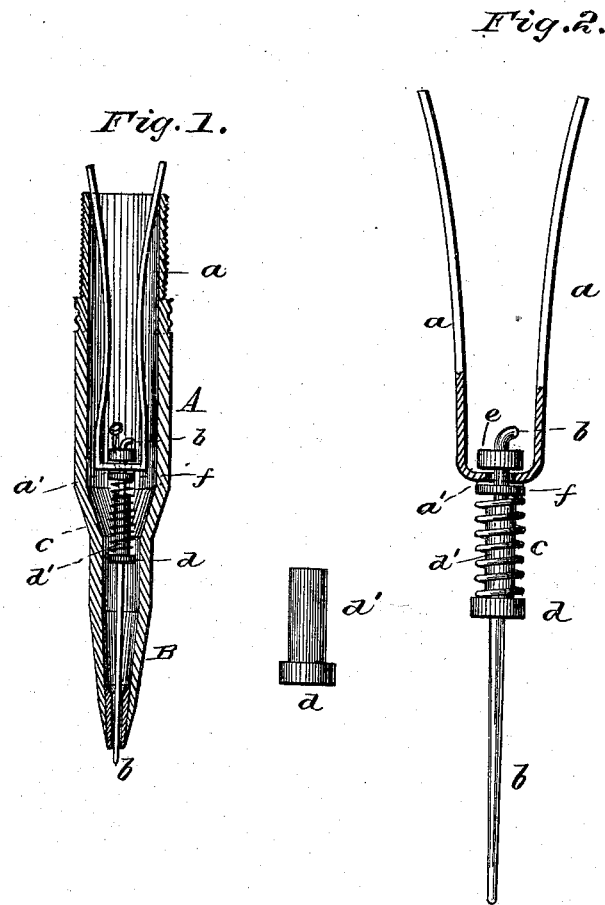


(No Model.)

F. C. BROWN.
STYLOGRAPHIC FOUNTAIN PEN.

No. 264,854.

Patented Sept. 26, 1882.



WITNESSES:

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FRANCIS C. BROWN, OF NEW YORK, N. Y.

STYLOGRAPHIC FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 264,854, dated September 26, 1882.

Application filed April 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. BROWN, a Canadian subject of the Queen of Great Britain, residing at the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Stylographic Fountain-Pens; and I 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.

My invention has relation to fountain-pens, particularly the class of stylographic pens wherein a tubular writing-point is used within which a fine needle or point-clearer vibrates to keep the ink-delivery orifice clear and unobstructed; and my said invention consists in a novel construction and arrangement of supporting-frame for securing the needle or point-clearer in proper position within the point-section of the pen.

The object of my invention is to cheapen and simplify the construction of the devices employed in stylographic fountain-pens to keep the writing-orifice clear, now generally termed the "needle" or "point-clearer," and at the same time render the same easy of adjustment and, to a certain extent, self-regulating.

To this end the invention therefore embodies several novel features, as hereinafter set forth and claimed.

Referring to the drawings forming part of this specification, Figure 1 is a longitudinal central section of a point-section of a stylographic fountain-pen with my improved form of needle support or frame applied in position therein; Fig. 2, an enlarged view of the needle-supporting frame, showing its construction and the manner of attaching the needle thereto.

A represents the point-section, of the usual or any approved construction, and B the tubular writing-point thereof. *a* represents the needle-supporting frame, and *b* the needle or point-clearer; *c*, the reacting spring for the needle. The frame or yoke *a* is composed of a piece of narrow spring metal of such length that when bent, as shown, somewhat in the form of a U, and in position in the pen, one or both the ends thereof will project sufficiently beyond the top edge of the point-section to enable them to be grasped by the fingers. Through the bent end

of the yoke is a hole, *a'*, through which passes the needle or point-clearer *b*. To the needle, above its middle portion, is secured a collar, *d*, having a cylindrical smaller extension, *d'*, around which the reacting spring *c* is placed. At the top of the needle, within the yoke *a*, is a collar, *e*, secured to said needle, and which prevents the same falling out of position in the yoke.

f is a washer interposed between the top end of the reacting spring and the yoke to give a better bearing to the spring than the bent end of the yoke would afford. The hole in the yoke for the passage of the needle is of such size in relation to the size of the needle that a limited lateral play of said needle is permitted. The collar *e* forms a stop for the downward movement of the needle, and the end of the cylinder *d'*, abutting against the bent end of the yoke *a*, forms a stop to limit the upward movement of said needle. The amount of movement of the needle is therefore governed and limited in both directions. The frame or yoke carrying the needle is maintained in position by the spring ends thereof coming against the inside of the point-section, as shown in Fig. 1. To adjust the frame or remove it from the point-section, all that is necessary is to compress or press toward each other the projecting ends of the spring-frame *a*, when the same may be readily removed. It is not necessary that both ends of the frame project beyond the edge of the point-section, as one may be sufficient to manipulate the parts; but the construction shown is preferred. Should it occur that the frame be inserted into the point-section such a depth that the needle projects too far from the writing end, so as to stop the flow of ink from the pen, by simply pressing upon the projecting point of the needle the entire frame will be carried back. This occurs by reason of the end of the cylinder *d'* on the needle abutting against the bent end of the yoke, and said yoke will consequently be forced back until the end of the needle is flush with the writing end of the pen; the reacting spring of said needle being also compressed, when the pressure is removed the needle will project the proper distance from the writing point of the pen. My pen is therefore, by reason of this construction—combining a stationary needle-hold-

er with a spring-needle—the only one of which I am aware wherein the proper protrusion of the needle may be adjusted by action upon the needle itself at the writing end of the pen and without separating the parts thereof.

The cleaning of the delivery-orifice of the pen may be performed by catching hold of the projecting end or ends of the yoke, clamping them together, and working the frame up and down, thus driving out any object that may have become lodged in the orifice of the point.

The invention consists, therefore, of a “combined needle-support and point-clearer.”

I am aware of the patent granted to E. B. Nimmo April 27, 1880, No. 226,925, for a somewhat similar invention as mine; but in his pen the needle and its frame are of a different construction from mine, and the frame is rigidly secured within the point-section by a screw-collar. The movement to adjust the needle is therefore by a screw action, and the protrusion of the needle cannot be regulated by pressing upon the protruding end of the needle, as in mine.

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

1. In a stylographic fountain-pen, the spring frame or yoke carrying the spring-actuated needle or point-clearer, adapted to be retained in position within the point-section by the elasticity of the jaws of said yoke impinging against the bore of the point-section, and of such length as to project beyond the top edge of the point-section, as and for the purposes hereinbefore set forth and shown.

2. The combination, in a stylographic fountain-pen, with the point-section, of the spring frame or yoke retained in position within said point-section by the jaws of the yoke impinging against the sides of the bore of the point-section, needle, or point-clearer passing through the lower portion of said yoke, and having a stop above and below the said yoke to limit its movement, and spring around the needle for reacting the same, as hereinbefore set forth and shown.

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Witnesses:

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