

PATENT SPECIFICATION



Application Date: Dec. 1, 1919. No. 29,956/19.

164,043

Complete Accepted: June 1, 1921.

COMPLETE SPECIFICATION

Improvements in Fountain Pens.

I, JOHN EDWARD HAYES, of 1625—49th Street, Brooklyn, New York, United States of America, President of a company, do hereby declare the nature of 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 relates to pens of the type having a flat shank and a curved point, and its object is to provide a pen particularly adapted to fountain pens, and is so formed that a uniform or approximately uniform ink line will be produced irrespective of the pressure exerted on the pen in writing.

It has previously been proposed to produce an effect similar to that above outlined by providing pen nibs comprising a curved nib portion and a transversely curved shank portion with a plane intermediate resilient part.

The invention consists of a pen having a resilient flat shank which is continued to form a curved slitted nib portion, the members of which are yieldable to spread to a limited degree for producing the desired line in writing, said nib as a whole when thus spread having a resiliency inferior to that of the shank, the said shank being yieldable to undue pressure of the split nib, and the feed bar of the fountain pen serves as a back for the pen and limits the same from flexing beyond the plane of the shank.

I am aware that a pen point having a resilient flat or substantially flat shank and a curved slitted nib portion applied to a fountain pen is disclosed in No. 19,544/97.

My improved pen point will be described hereinafter as employed in a fountain pen.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a plan view of a fountain pen drawn on an enlarged scale, with the improved pen point applied thereto;

Figure 2 is an enlarged sectional view of the writing end of the fountain pen;

Figure 3 is a plan view of the pen point;

Figure 4 is a side view thereof;

Figure 5 is a transverse sectional view on the line 5—5, Figure 3;

Figure 6 is an enlarged longitudinal section of the forward end of the fountain pen.

Referring to the drawing, 1 designates the barrel of a fountain pen, 2 the nozzle, 3 the pen point and 4 the feed bar of the "top feed" type.

The pen point 3 comprises a flat, straight shank *a* that continues into a spear-head point *b* that has a longitudinal slit *c* in its point or nib. The spear-head portion of the pen point is curved or arched transversely, as clearly indicated in Figure 5. The arch causes the nib or slit point to open slightly when pressure is brought to bear on the point in writing, and the flat back or shank permits of a certain spring which prevents the nib from opening more than a certain distance, depending upon the amount of the arch or transverse curvature of the spear portion of the pen. In other words, the members presented by the split, transversely curved nib, will readily spread to a predetermined degree under the normal writing pressure to produce the desired written line, but said members obviously offer an increasing resistance to spreading pressure, and the superior resiliency possessed by the shank relatively to the

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split nib as a whole, causes the shank to yield to increasing pressure on the nib and to flex adjacent to the nib, thus permitting the nib to yield as a whole to the excessive pressure without a continued spreading of the members of the nib. Thus, under the pressure of writing the pen nib or point opens to a limited predetermined degree largely governed by its curvature; second, following the opening to the predetermined degree, the shank flexes and prevents the further pressure being exerted on the split point in a way to tend to further open the pen; and third, the flexure of the shank is limited by the top feed bar. The feed bar serves as a back for the pen to limit the same from flexing beyond the plane of the shank, and consequently the spreading of the slit of the pen is limited so that a line of uniform thickness will be produced irrespective of the application of excessive pressure in writing, which is especially valuable in making carbon duplicates of writing.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle

of operation, together with the article which I now consider to be the best embodiment thereof, I desire to have it understood that the article shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

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:—

1. A pen point of the type described, having a resilient flat shank and a curved slitted nib portion the members of which are yieldable to spread to a limited degree for producing the desired line in writing, the said nib as a whole when thus spread having a resiliency inferior to that of the shank, and the said shank being yieldable to undue pressure on the split nib.

2. A pen point as claimed in Claim 1, wherein the yielding of the shank is limited by the back of the feed bar of the fountain pen.

3. A pen point substantially as described with reference to the accompanying drawings.

Dated this 1st day of December, 1919.

MARKS & CLERK.

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

Fig. 1.

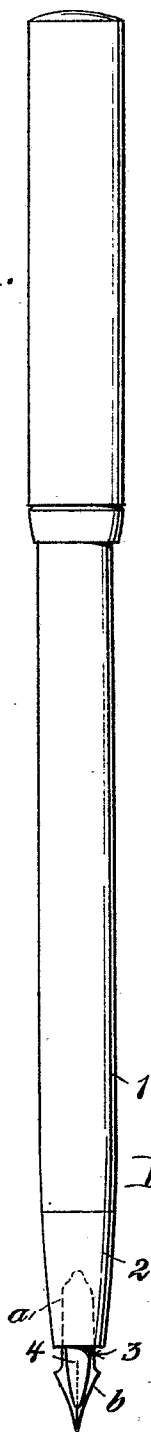


Fig. 2.

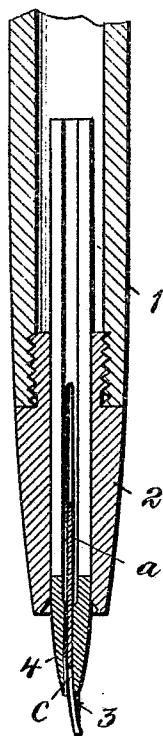


Fig. 3.

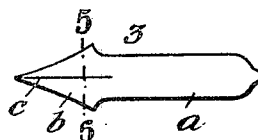


Fig. 4.

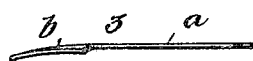


Fig. 6.

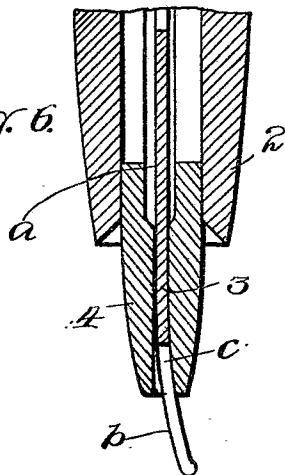


Fig. 5.

