

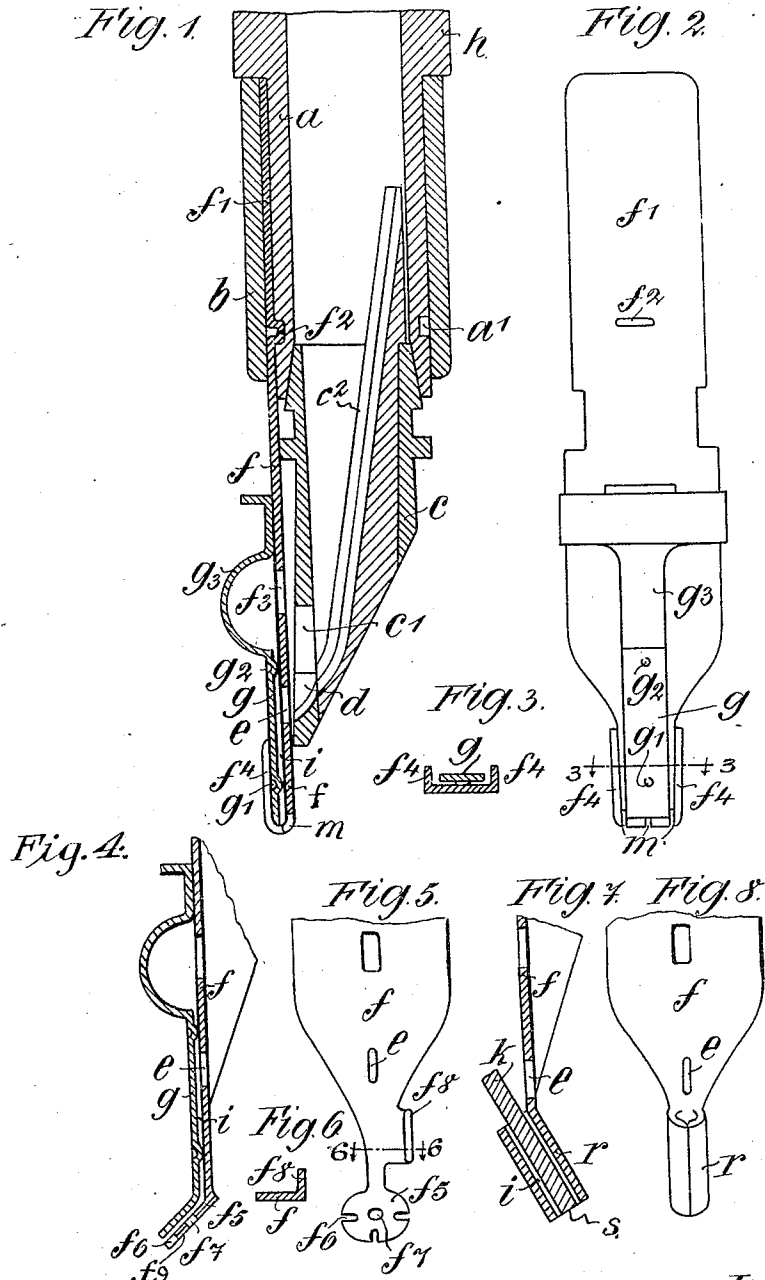
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DRAWING PEN NIB, MORE PARTICULARLY FOR FOUNTAIN PENS

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# UNITED STATES PATENT OFFICE.

THEODOR KOVACS, OF BERLIN, GERMANY.

DRAWING-PEN NIB, MORE PARTICULARLY FOR FOUNTAIN PENS.

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To all whom it may concern:

Be it known that I, THEODOR KOVACS, a citizen of Hungary, residing at 108 Lindenstrasse, Berlin, SW., Germany, have invented new and useful Improvements in Drawing-Pen Nibs, More Particularly for Fountain Pens, of which the following is a specification.

This invention relates to drawing-pen nibs, which are more particularly intended for use in connection with reservoir or fountain pens. In reservoir or fountain pens, it is usual for the nib to be split longitudinally to permit the flow of ink, these nibs being suitable for ordinary writing in which the varying pressure during the up and down strokes is utilized, but such nibs are not suitable for drawing purposes in which a uniform flow of ink is necessary in order that the lines may be of uniform thickness throughout.

According to the present invention, the drawing-pen nib is not split longitudinally, but is perforated to permit the passage or flow of ink from the inner to the outer surface of the pen, from whence the ink is fed by capillary means along the outer surface of the nib to the point thereof.

In order that the invention may be more clearly understood, reference is hereinafter made to the accompanying drawings, illustrating various forms of the improved drawing-pen nib by way of example:—

Fig. 1 is a vertical section of the lower part of a fountain pen having a detachable drawing-pen nib according to one form of the present invention.

Fig. 2 is a front view of the nib.

Fig. 3 is a transverse section taken on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary vertical section corresponding to Fig. 1 showing a slightly modified form of nib suitable for producing block characters.

Fig. 5 is a front view of the nib shown in Fig. 4 with the covering member *g* removed.

Fig. 6 is a fragmentary section taken on the line 6—6 of Fig. 5.

Fig. 7 is a view corresponding to Fig. 4 showing a tubular pointed nib, and

Fig. 8 is a front view of the tubular pointed nib with pin *k* removed.

Referring to Figs. 1, 2 and 3 of the drawings, the pen nib is shown detachably

mounted in a holder *h* having a reduced portion or neck *a*. The shank *f*<sup>1</sup> of the nib *f* bears against the reduced portion *a* and has a rib or projection *f*<sup>2</sup> which engages in an annular recess *a*<sup>1</sup> in the reduced portion *a* and thus secures the nib against axial displacement. The nib is held in position on the reduced portion *a* by a thimble or ring *b*. The tapered outlet end of the reduced portion *a* is adapted to receive the ink feed member *c* having the ink-feed channels *c*<sup>2</sup> which terminates in an outlet orifice *d* through which the ink is supplied to the nib *f*. The latter is perforated at *e* to permit the flow of ink to the outer surface of the nib, the latter being covered by a cover plate or member *g* having spacing elements or projections *g*<sup>1</sup> and *g*<sup>2</sup> which bear against the outer surface of the nib and provide a narrow space or capillary chamber *i* which extends over the perforation *e* and up to the point of the nib. In order to admit air to the interior of the ink feed member *c*, the cover plate *g* is curved at *g*<sup>3</sup> so as to uncover an air hole *f*<sup>3</sup> in the nib *f*, the air entering the ink feed member *c* through the aperture *c*<sup>1</sup> which may form a continuation of the aperture *d*.

The capillary chamber *i* feeds the ink to the writing surface or point of the nib quite independent of the movement of the pen.

As more clearly seen in Fig. 2, the writing surface or point of the nib may be notched or interrupted at *m* to prevent the nib from squeezing the ink before it. In order to determine the length of the writing surface of the nib and to prevent leakage of the ink at the sides of the nib, the lateral edges of the nib may be turned substantially at right angles at *f*<sup>4</sup>, as more clearly seen from Fig. 3. The outwardly bent lateral edges *f*<sup>4</sup> of the nib may extend some distance upwardly so as to provide lineal guiding means for the nib.

In the construction illustrated in Figs. 4 to 6, the nib is particularly intended for producing block characters. In this case the nib *f* is similarly provided with a perforation *e* and cover plate *g* forming a capillary chamber *i*. The writing portion or point of the nib *f*<sup>5</sup> is of flat or disc shape disposed at an angle to the shank of the nib and provided with notches *f*<sup>6</sup> and a perforation *f*<sup>7</sup> so that the ink will flow back

again from the outer surface of the nib to the inner surface thereof, at the point of the nib. The cover plate *g* is preferably shaped to suit the inclined disc-shaped surface *f*<sup>5</sup> of the nib and the nib *f* may be formed with a lateral projection *f*<sup>8</sup> adapted to serve as a lineal guide. Marking or writing is done with the flat surface *f*<sup>9</sup>.

Figs. 7 and 8 illustrate a tubular pointed nib *f* which is similarly provided with a perforation *e* whereby the ink flows from the inner to the outer surface of the nib. Immediately beneath the perforated portion of the nib is provided a tubular portion or point *r* which may be fitted with a pin or its equivalent *k* so as to form a capillary chamber *i* between the pin *k* and the tubular portion *r*. The ink will then flow through the capillary chamber *i* from the perforation *e* and be fed to the point of the nib by capillary action. Marking is done with the flat surface *s*.

The nib as illustrated in Figs. 7 is particularly suitable for producing thick lines, but for finer lines the pin *k* may be dispensed with and the tubular portion *r* constructed to constitute a capillary chamber in itself.

#### Claims:

1. In a fountain drawing pen in combination, an ink reservoir, means for detachably holding by its shank, an unslotted pen nib having a perforation therein, means for feeding ink from the reservoir through the perforation to the outside of the pen, and capillary means for conveying ink from the perforation to the point of the nib.

2. A drawing pen nib for fountain pens comprising an unslotted member with a shaft for detachably fastening it to an ink reservoir and having a perforation above the point thereof and a capillary feeding

means on the outside thereof between the point and the perforation.

3. A drawing pen nib for fountain pens comprising a pointed member having a perforation above the point thereof and a second perforation above the first, a capillary feed means on the outside of the nib extending from the first mentioned perforation to the point, and means for admitting air to said second perforation.

4. A drawing pen nib for fountain pens comprising a pointed member having a perforation above the point thereof and a second perforation above the first, and a strip on the outside of the nib covering both said perforations, the strip being disposed close to the nib between the point and the first perforation to provide a capillary feed, and being bent away from the nib over the second perforation to allow free access of air thereto.

5. A drawing pen nib terminating in an inclined writing surface comprising a flat portion disposed at an angle to the nib and formed with ink passages therein, the nib having a perforation at a distance from the writing surface, and capillary feeding means on the outer side of the nib, extending from the perforation to the writing surface and being parallel to said surface.

6. In a writing and drawing instrument, a fountain ink reservoir serving as a handle and a detachably arranged unslotted pen being shaped with a shaft as an ordinary writing pen and having an opening for the passage of ink from the reservoir to the upper surface of the pen, and capillary means on said upper surface to convey ink from said opening to the writing point.

THEODOR KOVACS.