Nov. 5, 1957 J. L. MOTT, SR 2,811,946

WRITING INSTRUMENT

Filed July 27, 1956

Fig. 1

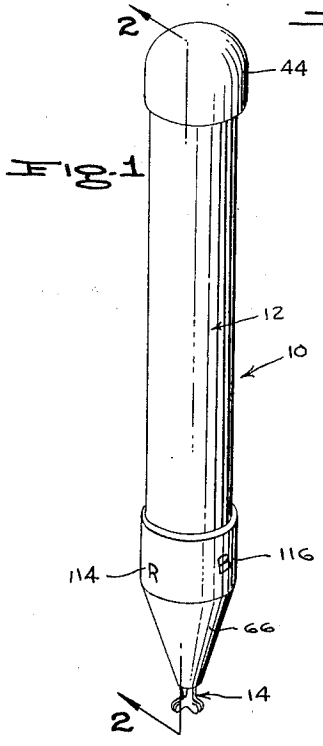


Fig. 2

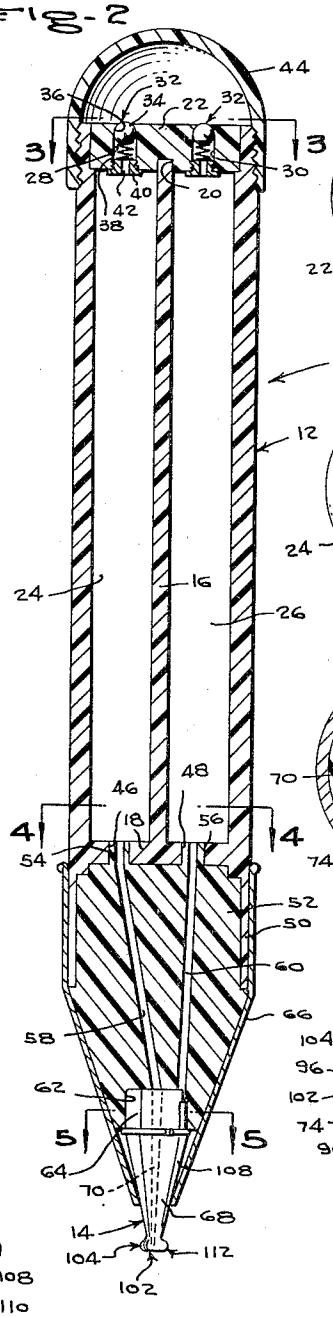


Fig. 3

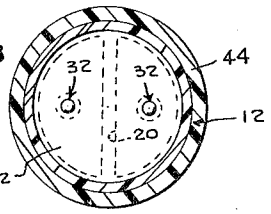


Fig. 4

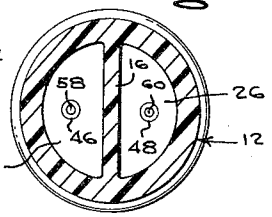


Fig. 5

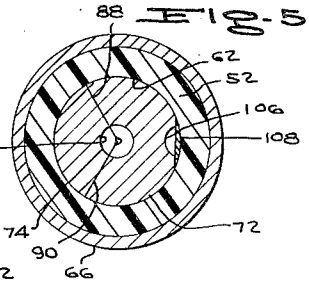


Fig. 6

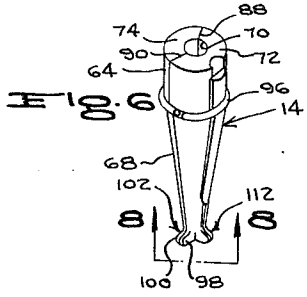


Fig. 7

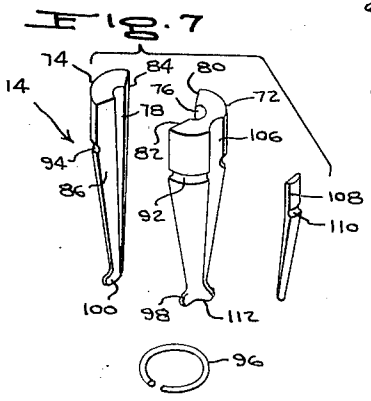
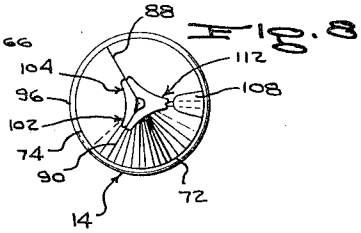


Fig. 8



INVENTOR.

JACOB L. MOTT SR.

BY

McMorrow, Berman & Davidson

ATTORNEYS

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WRITING INSTRUMENT

Jacob L. Mott, Sr., La Jara, Colo.

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2 Claims. (Cl. 120—42.12)

This invention relates generally to writing instruments and is more particularly concerned with new and useful improvements particularly related to fountain pens.

A primary object of invention is to provide a novel fountain pen construction including a pen point assembly providing pen points affording width graduation of a line being inscribed, and further including independent pen points which are supplied from independent ink reservoirs wherein different color inks are afforded in a single fountain pen.

A further object of invention in conformance with that set forth resides in a novel pen point assembly constructed from segmental block elements which cooperate to define the independent pen point assemblies.

Further objects of invention reside in the novel combination and structural details of the novel fountain pen and pen point assembly.

And yet another object of invention in conformance with that set forth resides in a novel fountain pen which is readily and economically manufactured, easily used, and highly satisfactory and practical for the purpose intended.

These together with other objects and advantages which will subsequently become apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the novel fountain pen;

Figure 2 is an enlarged vertical sectional view taken substantially on line 2—2 of Figure 1;

Figures 3, 4, and 5 are transverse sectional views taken substantially on lines 3—3, 4—4, and 5—5, respectively, of Figure 2, Figure 5 being substantially enlarged;

Figure 6 is an enlarged perspective view of the novel pen point assembly incorporated in the invention;

Figure 7 is an exploded perspective view of the pen point assembly of Figure 6; and

Figure 8 is an enlarged bottom plan view of the novel pen point assembly looking from line 8—8 of Figure 6.

Referring to the drawing in detail, the novel fountain pen is indicated generally at 10 and includes a barrel member 12 and a pen point assembly indicated generally at 14.

The barrel or body member 12 is open at both ends and is constructed of any suitable material, plastic lending itself to mass production methods, and has extending longitudinally therewithin a partition wall 16 integral with a transverse partition 18 at one of the open ends, the other open end being received in a suitable groove portion 20 of a plug element 22, said plug element 22 being disposed about the inner periphery of the other end of the body member 12. The partition wall 16 defines within the body member separate ink reservoir compartments 24 and 26 which may contain different colored inks such as blue and red, for example. The plug element 22 has extending transversely therethrough bore portions 28 and 30 which respectively communicate with the ink reservoir compartments 24 and 26, each of said bore portions 28 and 30 incorporating therein a refill valve assembly for filling said compartments with ink.

The valve assemblies of the bore portions 28 and 30 are indicated generally at 32 and include a spherical valve element 34 engageable with a suitable valve seat portion 36 at one end of the bore portions, see bore portion 28, said valve element 34 being engaged by one end of a compression spring element 38, the other end of which being in engagement with a suitable retaining screw element 40 threadedly received within the other end of said bore portions, said retaining screw 40 having a transverse aperture portion 42 permitting the passage of ink therethrough when the valve element 34 is depressed, the ink reservoir compartments being filled by means of a suitable eye dropper, for example. The other end of the body member 12 is externally threaded and receives thereon a suitable closure cap 44.

The partition wall 18 has extending therethrough transverse aperture portions 46 and 48 in communication with reservoir compartments 24 and 26, and the one end of the body member 12 terminates in a peripheral flange portion 50, said flange portion receiving therein the portion adjacent one end of a suitably conformed pen point assembly support core 52 which includes on its one end tubular sleeve elements 54 and 56 which are respectively received within the transverse aperture portions 46 and 48, see Figure 2. The tubular sleeve elements 54 and 56 communicate with internal ink passage portions 58 and 60, respectively, which extend longitudinally in spaced relationship within the support core 52. The portion adjacent the end of the support core 52 remote from the body member 12 is conically shaped about the outer periphery, and included in the end thereof is a recess portion 62 communicating with the ink passage portions 58 and 60. The recess portion 62 may have a circular cross section and removably received therein a conforming portion 64 adjacent one end of the pen point assembly 14. Circumposed about the flange portion 50 of the body member 12 and the support core 52 is a suitably conformed ferrule element 66, the free end portion of which terminating intermediately of the tapering or conical portion 68 adjacent the other end of the pen point assembly providing means for protecting a user's fingers from accidental contact with the ink on the pen point assembly.

The pen point assembly comprises segmental block elements 72 and 74 arranged in face to face abutting relation, the abutting faces of the block elements having cooperating longitudinally extending groove portions 76 and 78, Figure 7, which define together a longitudinal bore portion 70. The block element 72 has longitudinally extending side portions 80 and 82 which will have juxtaposed thereon longitudinally extending side portions 84 and 86, respectively, of the block element 74, and when the block elements are juxtaposed in their assembled relationship as shown in Figure 6, the engaged faces thereof will define ink passage portions 88 and 90 extending radially of the central bore portion 70, see Figure 6, which accordingly receive ink from the bore portion 58 in the support core, it being noted in Figure 2 that the bore portion 70 of the pen point assembly is in communication therewith. The segmental block elements 72 and 74 respectively include about their outer peripheries alignable groove portions 92 and 94 which receive therein a resilient retaining ring element 96 which will be circumposed about said segmental block elements for maintaining the pen point assembly in its assembled condition. The block elements converge adjacent the mat-

ing sides **80** and **84**, and **82** and **86** including at their lower end pen nib portions **98** and **100**, see Figures 6 and 7, accordingly providing plural pen points **102** and **104**, see Figure 8, said pen points being supplied by the same ink reservoir compartment but being so dimensioned to afford means whereby different widths of lines may be inscribed with the writing instrument. Accordingly, the user of the writing instrument merely has to rotate the body member **12** in his hand for utilizing either one or the other of the plural pen points of the fountain pen.

Extending longitudinally in spaced relationship from the longitudinally extending groove portions **76** of the segmental block element **72** is a longitudinally extending groove **106**, see Figure 7, which receives therein a longitudinally extending tapered strip element **108** being retained in overlying relationship relative thereto by means of the resilient ring element **96** engaging a transverse notch portion **110** in said strip element. The groove portion **106** combines with the strip element for defining on the outer periphery of the block element **72** a longitudinally extending ink conducting duct as clearly seen in Figure 5. The lower end portion of the segmental block element **72** terminates adjacent the lower end of the longitudinally extending groove portion **106** in a laterally extending nib portion **112** defining a pen point assembly **114**. The groove portion **106** is in communication with the ink passage portion **60** and accordingly receives a supply of ink contained in the reservoir compartment **26**, this pen point portion being radially disposed relative to the longitudinally extending bore portion **70** of the pen point assembly. Inasmuch as the pen will be disposed in an angular relationship relative to a writing surface, each of the pen points may be used independent of the other without the ink supply available to each of the pen points becoming mixed.

As seen in Figure 1 the ferrule portion **66** may have inscribed thereon a suitable indicia **114** and **116** for indicating the respective colors available from a given side of the fountain pen.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed is:

1. A fountain pen assembly including an elongated body member containing plural ink reservoir compartments, a pen point assembly support core extending longitudinally from one end of the body member and including independent longitudinal bore portions each in communication with a respective reservoir compartment, said bore portions being in communication with a recess portion formed in the end of said support core remote from said body member, and a pen point assembly having a portion adjacent one end conforming to and received in the recess portion of said support core, said pen point assembly comprising segmental block elements arranged in face to face abutting relation, the abutting faces of said

block elements having cooperating longitudinally extending groove portions and defining together a longitudinal bore portion communicating with one of the bore portions of the support core, said segmental block elements including longitudinally extending juxtapositionable side portions extending radially from the bore portion in said body member defining therein longitudinal ink passage portions, the block elements converging from the one end portion to the other end thereof and including pairs of pen nibs adjacent each of the other ends of each ink passage portion providing plural radially disposed pen points, one of said segmental block elements including a longitudinal groove portion in the outer periphery thereof in communication with another of the bore portions in the recess portion of the support core, an elongated strip element overlying the groove portion and defining an ink conducting duct therewith, said groove portion terminating in a pair of pen nibs providing an additional radially disposed pen point supplied from said groove portion to constitute an ink source independent of the plural radially disposed pen points first mentioned.

2. A pen point assembly for use in a fountain pen assembly including an elongated body member containing plural ink reservoir compartments, a pen point assembly support core extending longitudinally from one end of the body member and including independent longitudinal bore portions each in communication with a respective reservoir compartment, said bore portions being in communication with a recess portion formed in the end of said support core remote from said body member, and a pen point assembly having a portion adjacent one end conforming to and received in the recess portion of said support core, said pen point assembly comprising segmental block elements arranged in face to face abutting relation, the abutting faces of said block elements having cooperating longitudinally extending groove portions and defining together a longitudinal bore portion communicating with one of the bore portions of the support core, said segmental block elements including longitudinally extending juxtapositionable side portions extending radially from the bore portion in said body member defining therein longitudinal ink passage portions, the block elements converging from the said one end portion to the other end thereof and including pairs of pen nibs adjacent each of the other ends of each ink passage portion providing plural radially disposed pen points, one of said segmental block elements including a longitudinal groove portion extending longitudinally from the outer periphery thereof for communication with another of the bore portions in the recess portion of the support core, an elongated strip element overlying the groove portion and defining an ink conducting duct therewith, said groove portion terminating in a pair of pen nibs providing an additional radially disposed pen point supplied from said groove portion to constitute an ink source independent of the plural first mentioned radially disposed pen points.

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