J. ABEGG.

STYLOGRAPHIC PEN.

APPLICATION FILED JUNE 26, 1920.

1,379,603. Patented May 31 1921.

Fig. 1.

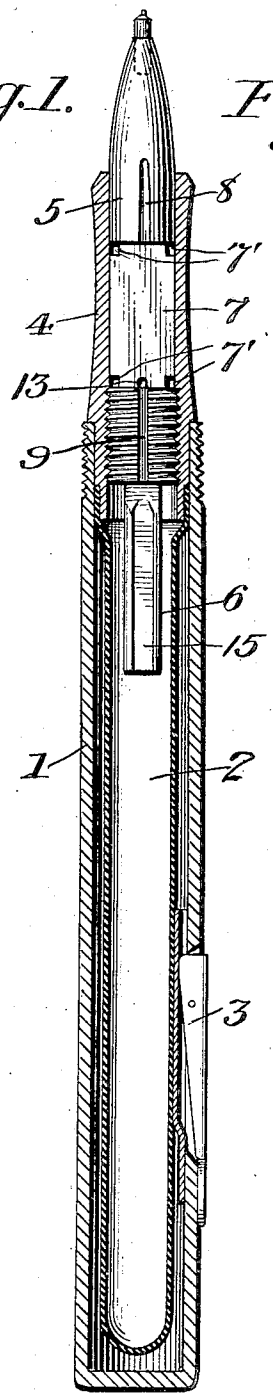


Fig. 2.

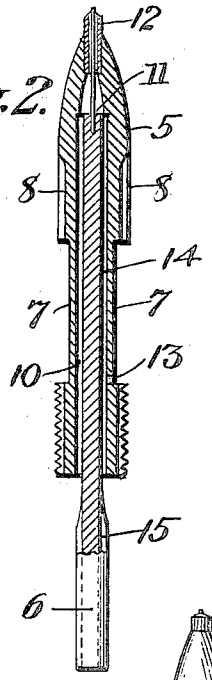
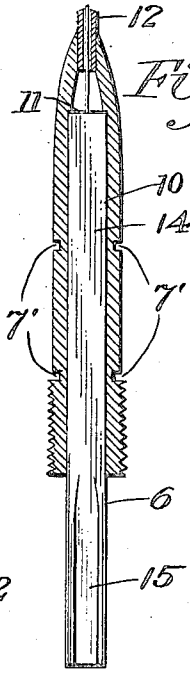


Fig. 3.



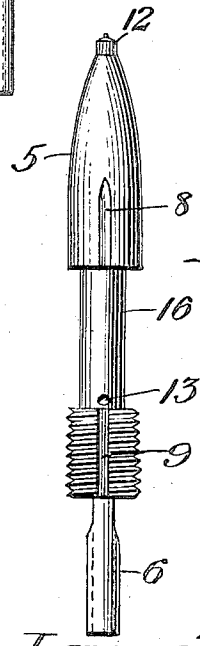


Fig. 4.

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UNITED STATES PATENT OFFICE.

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STYLOGRAPHIC PEN.

1,379,603. Specification of Letters Patent. Patented May 31, 1921.

Application filed June 26, 1920. Serial No. 391,878.

To all whom it may concern:

Be it known that I, JULIUS ABEGG, a citizen of the United States, residing at West Hoboken, county of Hudson, State of New Jersey, (whose post-office address is 101 Palisade avenue, West Hoboken, county of Hudson, State of New Jersey,) have invented certain new and useful Improvements in Stylographic 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.

This invention relates to stylographic pens and is an improvement over applicant's co-pending application, filed April 19th, 1920, Serial No. 375,104.

The principal object of this invention is to provide for the supplying of more air for venting the pen, to facilitate the continuous and easy flow of the ink without any leakage thereof when the pen is not in use. It has been demonstrated that heretofore pens of this type have not been supplied with an adequate, or sufficient supply of air and that said air supply means have been so small that they readily become clogged, and stopped up, during the constant use of the pen.

With the present form of pen, to be hereinafter more fully described, these difficulties have been overcome, resulting in a successful and finished product, both in construction and operation.

Briefly considered this invention comprises a pen of the type described, consisting of a main point section similar to that disclosed in my former application, having positioned therein a supplemental point section, the supplemental point section being substantially reduced or cut away at its intermediate portion and being provided with air venting channels connecting this reduced portion with the atmosphere and also air channels forming a communication between the reduced portion and the ink reservoir. In addition, there is provided an air feeding aperture connecting the reduced portion with the cylindrical hollow portion of the supplemental point section, in which hollow portion, is positioned the stylus holder in a manner quite similar to the positioning of the stylus holder in my application aforementioned. In this application, however, that portion of the stylus holder within the supplemental point section is reduced to a flat blade-like formation in order to increase the space between the stylus holder and the hollow portion of the supplemental point section, and that portion of the stylus holder extending without the supplemental point section being enlarged and provided with diametrically opposite ink feeding grooves. It will be noted that by this construction more air space is provided between the supplemental point section and the main point section, and likewise a greater space for the air and ink is provided between the stylus holder and the supplemental point section.

In the accompanying drawings:

Figure 1 is a view, partly in section and partly in elevation, illustrating the pen as a whole with the various parts in their assembled relations;

Fig. 2 is a sectional view showing the cut away portions of the supplemental point section and stylus holder;

Fig. 3 is a view partly in section and partly in elevation, taken at right angles to Fig. 2, illustrating the positioning of the stylus holder within the supplemental point section; and

Fig. 4 is a perspective showing a modification of the supplemental point section.

Referring more specifically to the drawings, the pen holder 1 carrying the ink reservoir 2 and the conventional type of self filling apparatus 3, has positioned therein the main point section 4. Secured within the main point section 4 is the supplemental point section 5, carrying the stylus holder 6. A substantial part of the intermediate portion of the supplemental point section 5, contained within the main point section 4, is cut away or reduced forming flat surfaces 7 arranged on diametrically opposite sides of said section providing an air reservoir between said supplemental point section and the main point section. Connecting these two oppositely disposed cut away portions 7 are openings 7^1, so that the air may freely flow from one side to the other. Connecting this reduced portion 7 with the atmosphere are air channels 8. The air communication between the ink reservoir and this reduced portion or air chamber is provided for by air vents 9, so that a complete and ample air communication can be established between the atmosphere and the ink reservoir by way of the reduced portion 7.

The supplemental point section 5 is also provided with a cylindrical bore 10 in which the stylus holder 6 is firmly positioned, an annular shoulder 11 being provided in the upper end thereof forming a stop for the angular end of the stylus holder. From this annular shoulder 11, the central bore is tapered to the writing point 12. Connecting the cylindrical bore 10 with the air chamber, formed by the reduced portion 7, is an aperture 13 which will supply the necessary air to said bore during the feeding of the ink therethrough.

In order to obtain as large a passage way as possible between the stylus holder 6 and the cylindrical bore 10, that portion of the stylus holder contained within the bore 10 is materially reduced and flattened on diametrically opposite sides, forming substantially a flat blade-like member, as shown at 14. A small portion of the stylus holder projects from without the supplemental point section, which portion is enlarged and provided with ink feeding grooves 15.

In the modification as illustrated in Fig. 4, the reduced portion of the supplemental point section 5, instead of being made flat, as shown in Figs. 1, 2 and 3, by cutting away the diametrically opposite sides of the supplemental point section, in this instance the cut away portion is carried continuously around the intermediate portion, as shown at 16, and thereby doing away with the openings 7^1. The remaining portion of this supplemental point section is identical with the construction as disclosed in Figs. 1, 2 and 3.

From the foregoing description it will be obvious that applicant has provided a stylographic pen in which ample air feeding means are provided and the various passage ways and openings are proportionately large enough to prevent any stopping up, or clogging of these communications, as distinguished from former types of pens of this character, which, from practical demonstration and use, have been found to be more or less inefficient for the reasons above stated.

What I claim is:

1. A stylographic pen, in combination with a pen holder, of a main point section and a supplemental point section carried thereby, said supplemental point section being provided with a cylindrical bore for the reception of a stylus holder, an air chamber between the main point section and the supplemental point section formed by materially reducing the intermediate portion of said supplemental point section, air channels leading from said chambers to the atmosphere, air channels forming communication between the air chamber and the ink reservoir and an air venting aperture connecting the reduced portion of said supplemental point section with the cylindrical bore of said section.

2. A stylographic pen, in combination with a pen holder, of a main point section, a supplemental point section carried thereby, said supplemental point section being provided with a cylindrical bore, a stylus holder positioned partly within the bore of said supplemental point section, that portion of said stylus holder within the bore being substantially flat and of blade-like formation and the part without said section enlarged and provided with ink feeding grooves, an air chamber between the main point section and the supplemental point section, formed by materially reducing the intermediate portion of said supplemental point section, air channels leading from said chambers to the atmosphere, air channels forming communication between the air chamber and the ink reservoir and an air venting aperture connecting the reduced portion of said supplemental point section with the cylindrical bore of said section.

3. A stylographic pen, in combination with a pen holder, of a main point section, a supplemental point section carried thereby, said supplemental point section being provided with a cylindrical bore, a stylus holder positioned partly within the bore of said supplemental point section, that portion of said stylus holder within the bore being substantially flat and of blade-like formation and the part without said section enlarged and provided with ink feeding grooves, the said supplemental point section being uniformly cut away to form an intermediate flattened portion providing an air chamber between said section and the main point section, air channels leading from said chamber to the atmosphere, air channels forming communication between the air chamber and the ink reservoir and an air venting aperture connecting the reduced portion of said supplemental point section with the cylindrical bore of said section.

In testimony whereof I affix my signature.

JULIUS ABEGG.