

UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 740,618, dated October 6, 1903.

Application filed April 21, 1903. Serial No. 153,646. (No model.)

To all whom it may concern:

Be it known that I, JOHN BLAIR, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fountain - Pens, of which the following is a specification.

My invention relates in general to fountain-pens, and in part it is particularly adapted to those fountain-pens which are designated as "stylographic" pens. The improved joint is adapted equally well to either the fountain-pen carrying a pen-nib or to the stylographic pen, as shown in the drawings herewith.

The objects of my invention are to make joints that will positively prevent soiling of the fingers when using the pen; second, to provide a needle-weight for a purpose to be hereinafter described, and third, to provide means for more easily withdrawing an empty or exhausted ink - cartridge from the pen-barrel.

The accompanying drawings illustrate the invention, the various parts of the device being referred to by letters, similar letters denoting corresponding parts in the several views.

In the drawings, Figure 1 is a side view, partly in section, showing my invention. Fig. 2 is an enlarged side view of the point-section. Fig. 3 is a plan of the inner end of the point-section. Fig. 4 is an enlarged plan of the needle-weight, and Fig. 5 is a side of the end of the barrel enlarged.

The letter A indicates the body or barrel of a fountain-pen, having an ordinary cap B and an open end threaded to engage the threads on the point-section.

C is a bag or cartridge, pervious to liquid, containing a supply of powdered or granulated ink soluble in water. *c* is a cord attached to said cartridge C and long enough to extend to the outer end of the barrel.

D is the needle in the point-section. It has a cylindrical weight *d* attached to its inner end. *d'* is a hole through the inner end of the weight *d*, by which the cord *c* is attached to said weight.

When the ink - supply is exhausted from the cartridge, by unscrewing the point - sec-

tion and holding the barrel with its open end down the weight *d* projects from the open end of the barrel, and by it the empty cartridge is easily drawn out. The weight *d* also draws the needle out from the point-section when the point is raised, thereby clearing the bore of said section from sediment and incrustations from the ink. It also compresses the cartridge as it falls against it if, when the pen is prepared for writing, the pen is turned point upward, which causes the cartridge to yield its ink more freely, and so produces a deeper color of the fluid.

E denotes the pen - section in a fountain-pen or the point-section in a stylographic pen. As shown in the drawings, it has a short tapered end with the usual perforated metal point.

The surface *e* next to the taper point is milled and forms a shoulder against which the open end of the barrel A is adapted to rest. The inner end *f* of the point-section is threaded to engage the thread in the open end of the barrel A. Between the shoulder *e* and the end *f* is a reduced portion, which when the parts are assembled forms a recess or chamber *h*. This recess is connected with the ink-chamber in the body by a channel *i* cut across the threads on the end *f* of the point-section, and as a continuation of the air-ducts one or more slits *a* are made through the edge of the threaded end of the barrel A. The channel *i* may be a narrow cut, as shown in Fig. 2, or a broader but shallower cut, as shown in Fig. 3. The air in the barrel is thus connected with the outer air through the channel *i*, recess *h*, and slit or slits *a*, which prevent suction or compression when removing or joining the parts just referred to.

In this invention I have provided two distinct joints between the barrel and the pen-section, and these joints are separated by an air-recess *h*. This recess *h*, whose walls are the threaded sides of the body A, retains by capillary attraction the small quantity of ink which generally works through the ordinary screw-joint; but as an additional guard I have made a contact-joint at the extreme outer edge of the barrel which effectually prevents the presence of ink on the exterior of the pen by which the fingers are soiled.

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

5 1. In a fountain-pen having an ink-cartridge and a withdrawing-cord attached thereto, a weight on said cord, for the purpose specified.

2. In a fountain-pen, having an ink-cartridge and a feed-needle, a weight on said
10 feed-needle for the purposes specified.

3. In a fountain-pen having a barrel with a threaded open end, a point-section having a threaded end adapted to be screwed into said barrel, a shoulder on said point-section
15 to contact with the edge of the barrel, a recess between said threaded end and said shoulder, a channel connecting said recess

and the ink-chamber and a vent through the edge of the barrel, substantially as herein described. 20

4. In a fountain-pen having an ink-cartridge and a withdrawing-cord attached thereto and a feed-needle with a weight attached thereto, means to attach said cord to the weight on said feed-needle, for the pur- 25
poses herein set forth.

In testimony whereof I have signed my name to this specification in presence of two witnesses.

JOHN BLAIR.

Witnesses:

LURINDA A. WILLIAMS,
ANNA F. CLANE.