C. A. ATKINSON.

FOUNTAIN-PENS.

No. 194,120. Patented Aug. 14, 1877.

Fig. 1

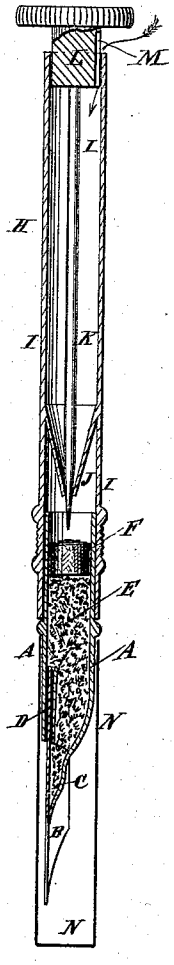
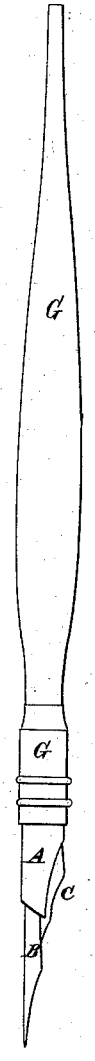


Fig. 2



WITNESSES:

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CHARLES A. ATKINSON, OF NEW YORK, N. Y.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **194,120**, dated August 14, 1877; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, CHARLES A. ATKINSON, of the city, county, and State of New York, have invented a new and useful Improvement in Fountain-Pens, of which the following is a specification:

Figure 1 is a longitudinal section of my improved pen. Fig. 2 shows the pen provided with a plain handle.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a writing-instrument that shall possess all the features of a good fountain-pen, and yet shall contain no fluid ink, which may be carried about the person without any danger of ink leaking out and staining the clothes, which may be readily replenished with a solid coloring substance, yielding a desirable ink when brought into contact with water, and which shall entirely avoid the liability of the ink to become clotted and clog the pen by remaining in it for a time, since the ink is not formed until the instrument is ready for use, and then only a drop at a time, the ink flowing with an even consistency, and ceasing to form the moment the water-supply is cut off.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A is the pen-holder, which is made hollow to serve as a chamber to receive the solid coloring matter, and its bottom is extended downward along the under side of the pen B, in the form of a tongue, C, to guide the ink, when formed, down to said pen B. The pen B is inserted in a socket, D, formed in the holder A.

E represents the coloring matter, which is solid, and may be in the form of a cake, or in a granulated or a powdered form, the cake form being preferred.

F is a piece of wool or other porous substance, which may be placed in the chamber A, above or below the coloring substance, to help regulate the flow.

G represents an ordinary wooden handle, which fits into the upper end of the holder A, and may be inserted and removed as desired.

H is a water-chamber, which is made in the form of a tube, I, having a funnel-shaped bottom, J, in its lower part, the orifice of which, in connection with the pointed rod K and the stopper L, having a vent channel or hole, M, formed in it, forms a valve.

The formation of the valve is immaterial, provided a regular flow of water is secured. This may be accomplished by the method shown in the drawing, or by threads inserted in the orifice of the funnel J, or in any other desired way.

N represents a cap, to be placed upon the holder A, over the pen B, when the instrument is not required for use.

The instrument may be used in two ways: First, by dipping it in water to the base of the tongue C, when it yields a perfect fluid ink. When through using it, it dries in a moment, and may be immediately placed in the pocket. The second way is to use the water-reservoir H. In this case the reservoir H is filled by removing the stopper L and rod K, placing a thumb or finger over the lower end of the tube I, and filling it with water. The rod K and stopper L are then inserted, and pushed down into place until the water trickles out through the valve a drop at a time, and that very slowly. The lower end of the reservoir is then inserted in the holder A, and the instrument is ready for use.

To stop the flow, the stopper L and rod K are pressed down to close the valve. Then, with a quick sharp jerk, the ink beneath the tongue C may be ejected, when the cap N may be put on and the instrument laid aside or placed in the pocket.

In case the porous plug F be placed beneath the solid coloring substance, the tongue C may be omitted.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the hollow holder A, having tongue C and socket D, of the tube I, having orificed funnel-bottom J, rod K, and channeled stopper L M, as shown and described, so that dry ink may be used and liquefied as wanted.

CHAS. A. ATKINSON.

Witnesses:

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