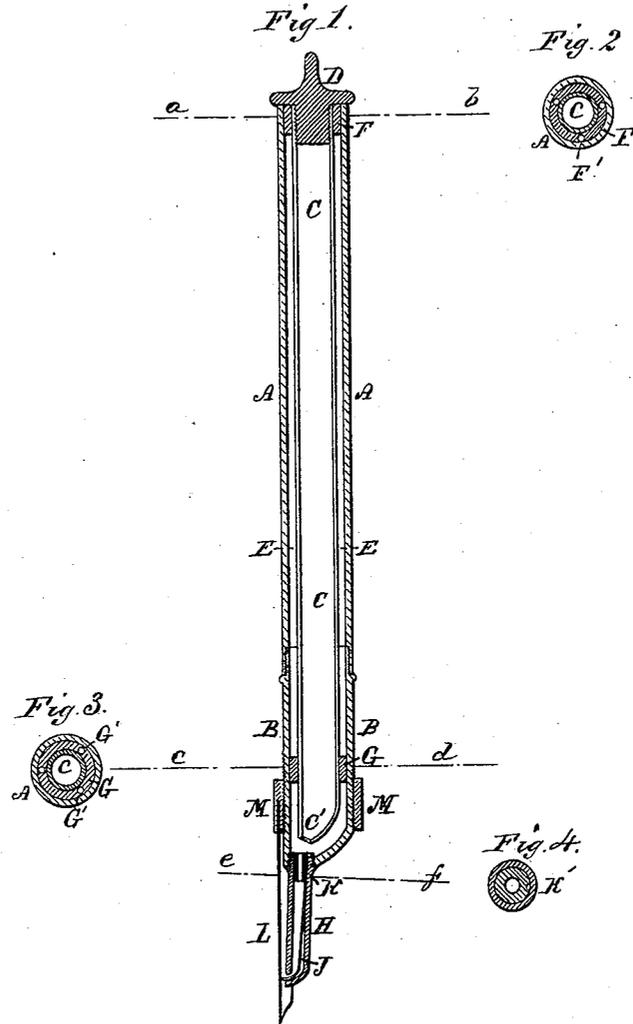


(No Model.)

F. HOLLAND.  
Fountain Pen.

No. 241,215.

Patented May 10, 1881.



Witnesses

Mendell B. Curtis  
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# UNITED STATES PATENT OFFICE.

FRANK HOLLAND, OF MANCHESTER, CONNECTICUT.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 241,215, dated May 10, 1881.

Application filed December 13, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK HOLLAND, of Manchester, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fountain-Pens; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to a fountain-holder to be used with metallic pens to furnish a continuous supply of ink.

Heretofore fountain-pens, when made to write with the common split nib, as in the ordinary form of metallic pen, have been supplied through an opening in the fountain, from which the ink flowed to the point without regard to the amount of writing done, so that sometimes the point would be overloaded and a drop would fall off; and sometimes, particularly when rapid writing was done with the ink supplied through a small aperture, sufficient ink would not flow down to the point.

The object of my invention is to obviate the foregoing difficulties and provide a mechanism to be used with a common pen which will regulate the amount of ink discharged by the amount of writing done.

In the accompanying drawings, illustrating my invention, Figure 1 is a central longitudinal section through the holder, point-section, and pen. Fig. 2 is a cross-section on the line *a b* of Fig. 1. Fig. 3 is a cross-section on the line *c d* of Fig. 1. Fig. 4 is a cross-section through the delivering-point, on the line *e f* of Fig. 1.

A is the outer shell or case of the holder.

B is the point-section, screwed onto the case A and forming a continuation of it.

C is the ink-reservoir. This is closed at the top by the screw-cap D, and is furnished with an aperture at the bottom, C', through which the ink flows into the point-section.

E is an air-chamber between the ink-reservoir and the parts A and B surrounding it.

F and G are rings or collars between the ink-reservoir and the outer shell, for the purpose of holding the parts in place. They are attached

to the ink-reservoir, and are furnished with the openings F' G', to allow air to pass. The ring F can be held to the outer case by friction, or it may have a left-handed screw-thread, the thread on the cap D being right-handed. The ring G is sufficiently free on the point-section B to allow the latter to be easily removed when required.

H is the delivering-tube. It is of cylindrical form, closed at the bottom, and furnished with a small side opening for the passage of the ink to the pen.

J is a needle, bent as shown in the drawings, so that its point projects through the opening in the side of the tube H, and the stem of which passes upward through the tube H to near its top.

K is a plug fitting into the top of the tube H, and held in place by friction, or, if metallic, the parts can be soldered. It is perforated by a small opening for the passage of the ink, and also has a nick, K', in its side, to hold the needle J. The needle is placed in this nick, and is secured between the plug and the wall of the tube H. Its lower end is left free and forms a spring, which is held in by the pen L, against which it rests, and presses outward when the pen springs outward under the pressure upon the paper in writing. The needle J thus moves out and in, and carries the ink with it through the aperture in the side of the tube H.

M is the pen-holder, into which the pen L is inserted. It is intended to be a ring of metal or other suitable material, surrounding the point-section B. The interior of the ring and the surface of the point-section are provided with a fine screw-thread, so that the pen can be elevated or depressed to bring the point of the needle in the proper position to receive the required vibration from the movement of the pen in writing.

The point-section and working parts of my invention can be used with any other upper part that will furnish the ink in the usual manner to the point-section.

A cap or cover can also be adapted to cover the tube H, as in stylographic pens; or a cap can be adapted to inclose the whole diameter of the holder with the tube and pen.

When the working parts of the point are used with a top portion of the construction de-

scribed, the cap D is slightly raised from its  
seat by unscrewing to admit air, which passes  
down outside of the ink-reservoir and enters  
the aperture C', to supply the place of the ink  
5 as it flows from the reservoir into the point-  
section. As soon as the ink falls below the  
opening C' a portion of air enters and ink flows  
out.

What I claim as my invention is—

10 1. The combination of the tube H, the needle  
J, bent outward to touch the pen, and plug K,

having a central opening and a nick, K', for  
the needle, as an ink-delivering device in a  
fountain-pen, substantially as described.

2. The holding-ring M, provided with an ad- 15  
justing screw-thread, in combination with the  
point-section B and delivering-tube H, sub-  
stantially as described.

FRANK HOLLAND.

Witnesses:

THEO. G. ELLIS,  
WILMOT HORTON.