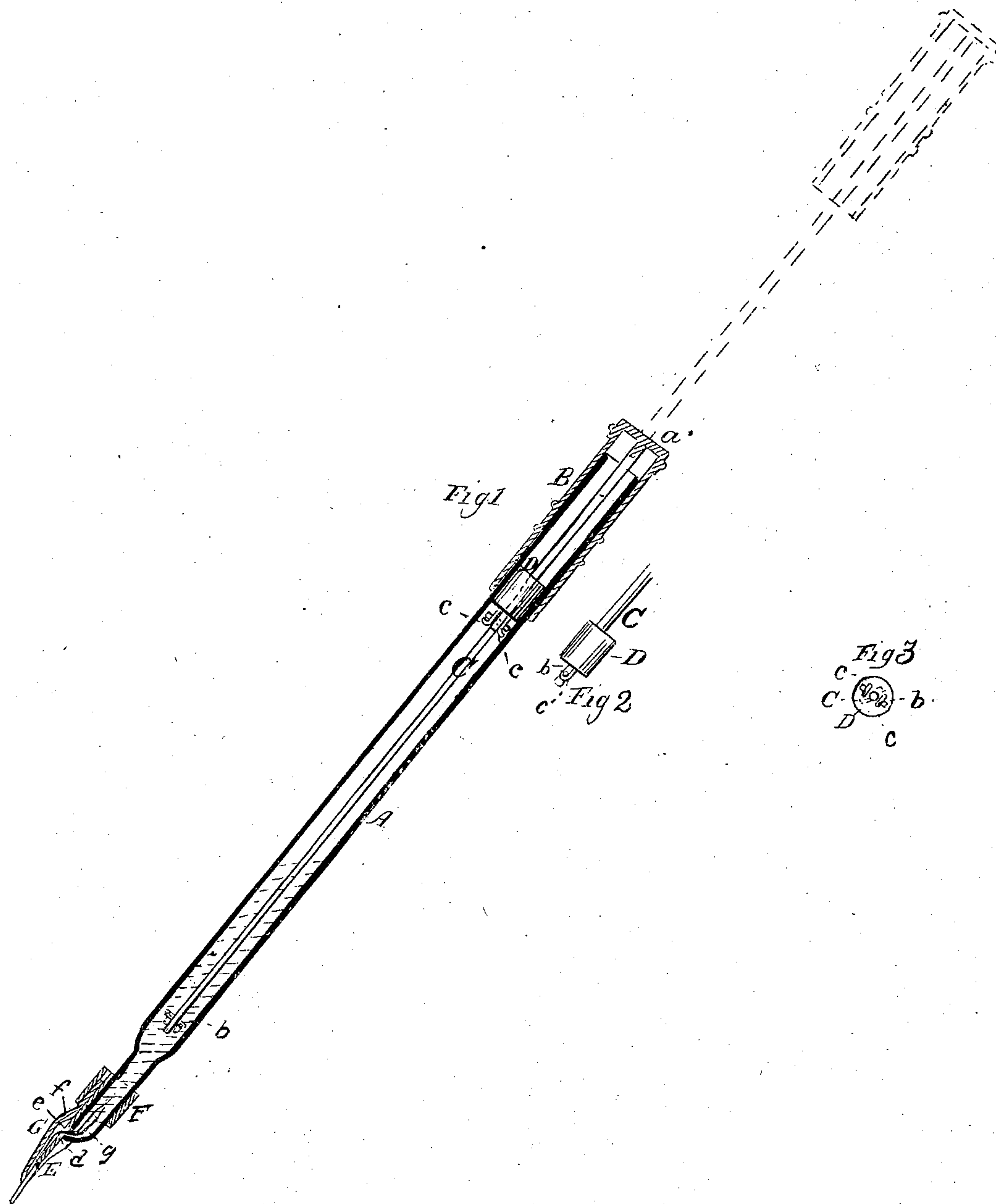


A. F. & C. M. H. Warren;
Fountain Pen.

No. 14,425.

Patented Mar 11, 1856.



UNITED STATES PATENT OFFICE.

A. F. WARREN AND C. M. H. WARREN, OF BROOKLYN, NEW YORK.

FOUNTAIN-PEN.

Specification forming part of Letters Patent No. 14,425, dated March 11, 1856.

To all whom it may concern:

Be it known that we, A. F. WARREN and C. M. H. WARREN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Fountain-Pen; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of our improvement, the plane of section being through the center. Fig. 2 is a detached side view of the piston attached to the end of its rod. Fig. 3 is a detached view of the under side of the same.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention consists in having the piston so arranged with its rod that it may be readily detached from it, so that when the piston is drawn upward the length of the fountain and the fountain filled with ink the piston-rod may be forced down within the fountain and thereby allow the cap to be fitted on the end of the fountain, the piston serving as a stopper.

Our invention further consists in the peculiar arrangement of the pen, and the manner in which it is connected with the fountain, so as to be supplied evenly or regularly with ink from the fountain, as will be presently fully shown and described.

To enable others skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the ink-fountain, which serves as the handle of the pen, said fountain being a tube of proper dimensions and formed of any suitable material.

On the upper end of the tube A a cap B is fitted, said cap having a rod C, attached to the inner side of its top piece *a*. The rod C is a little shorter than the tube A, so that when the cap B is fitted on the end of the tube the lower end of the rod will not reach the lower end of the tube, the rod C being within the tube. (See Fig. 1.) The lower end of the rod C has a pin *b* passing transversely through it.

D represents the piston formed of any proper material and fitted snugly within the tube A, but allowed to work freely up and down therein. The rod C passes through the center of the piston D and may be drawn back and forth through it, the pin *b* being below the

piston. The under side of the piston has two hooks *c c* attached to it, a hook being at each side of the rod C, which is in line with the two hooks, as shown clearly in Fig. 3. The lower end of the tube A is made rather smaller in diameter than the other portion of it, and has an aperture *d* made through it at its extreme end.

E is the pen, which is secured to the lower end of the tube A by a band F, said band passing around the upper end of the pen and the lower end of the tube, as clearly shown in Fig. 1.

Through the pen E there is made an aperture *e*, which is directly over the aperture *d* in the end of the tube where the pen is secured to it. (See Fig. 1.)

To the back or convex side of the pen E a plate G is attached. This plate is of somewhat curved form, its lower end bearing upon the pen E a short distance above the nib or point, the upper end of the plate being attached to the pen. A space *f* is formed between the pen and plate, owing to the curved shape of the plate. A wire *g* is attached to the back or convex side of the pen just above the lower end of the plate G. This wire passes through the aperture *e* in the pen and through the aperture *d* in the tube and passes a short distance upward within the tube, as clearly shown in Fig. 1.

The tube A is filled with ink in the following manner: If the piston D is at the upper end of the tube A and the whole of the rod C within the tube, the cap B is withdrawn from the upper end of the tube A, and the rod C is drawn outward from the tube till the pin *b* reaches the hooks *c c* at the under side of the piston. The rod C is then turned to allow the pin *b* to pass between the two hooks, and the rod C is then turned to allow the ends of the pin to catch into the hooks, as shown in Figs. 2 and 3 and in red in Fig. 1. The piston D is thereby attached to the end of the rod C and the piston is forced down to the lower end of the tube and the pen E put in the ink and the rod and piston drawn outward till the piston reaches the upper end of the tube, the ink of course being drawn up within the tube through the apertures *e d*. The rod C is then detached from the piston by turning the rod and freeing the pin *b* from the hooks *c c*, and the rod is forced down within the tube, the

cap B being placed or fitted on the upper end of the tube A. The ink is conducted to the pen by the wire *g*, the ink passing through the apertures *e d* into the space *f*, which serves as a reservoir for the nib of the pen, the nib being supplied from the reservoir *f*, and the reservoir receiving its supply from the tube in consequence of the wire *g*.

By the above improvement the pen receives a regular or even supply of ink, the elasticity of the pen causing the ink to flow freely and as required from the reservoir or space *f*, while the wire *g* will always keep the reservoir supplied. In consequence of allowing the piston to be detached from the rod C the implement is rendered portable, and the detached piston at the upper end of the tube serves as a stopper.

We do not claim the plate G separately, for they have been previously used, although applied to the pen in a way different to that herein shown. Neither do we claim a piston for filling the fountain with ink, for they have been also used for the same purpose; but

What we do claim as new, and desire to secure by Letters Patent, is—

1. Having the piston D and rod C arranged as shown or in an equivalent way, so that the piston may be detached from the rod when the tube or fountain is filled with ink, for the purpose specified.

2. Attaching the pen E directly to the lower end of the tube A by the band F, and conducting the ink from the tube A to the back or convex side of the pen by the wire *g*, which is attached to the pen and passes through the apertures *e d*, as described.

3. The plate G, attached to the back or convex side of the pen E, in combination with the wire *g*, arranged as described, for the purpose of insuring a regular and even supply of ink to the pen.

A. F. WARREN.

C. M. H. WARREN.

Witnesses:

WM. TUSCHE,
JAMES F. BUCKLEY.