H. C. BENSON.

FOUNTAIN-PEN.

No. 193,071. Patented July 17, 1877.

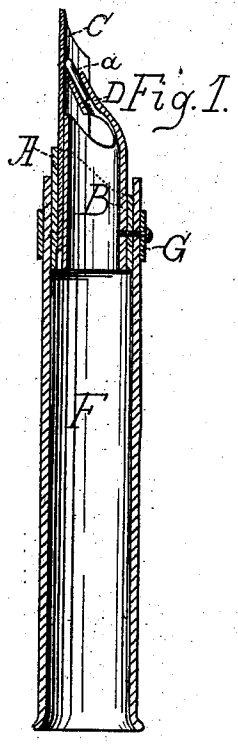


Fig. 1.

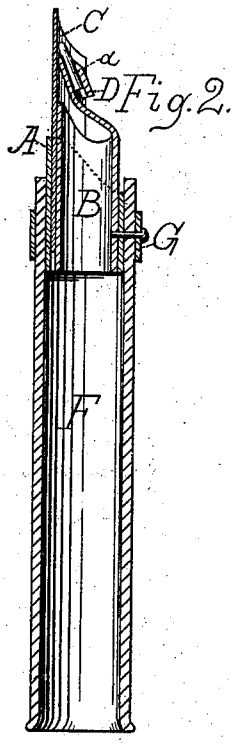


Fig. 2.

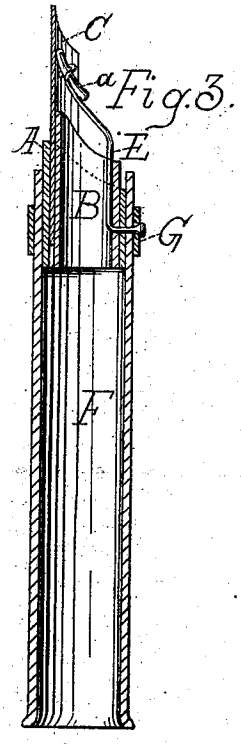


Fig. 3.

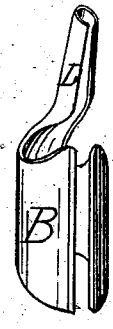


Fig. 4.

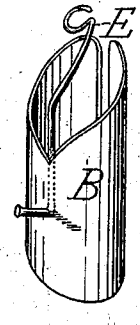


Fig. 5.

Attest:

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UNITED STATES PATENT OFFICE.

HENRY C. BENSON, OF YONKERS, ASSIGNOR TO JOSEPH RECKENDORFER, OF NEW YORK, N. Y.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. **193,071**, dated July 17, 1877; application filed June 19, 1877.

To all whom it may concern:

Be it known that I, HENRY C. BENSON, of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Pens; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that kind of pen which is provided with a soluble solid ink or writing material, so arranged that when the pen is dipped in water said material will, to a certain extent, dissolve in the water held by the pen, and thus produce an ink or writing-fluid, which will be given off by the pen in the usual way.

I am aware that a pen in which the combination above named is found has before been made.

My invention relates to the means for holding and maintaining the solid writing material in proper position with relation to the pen.

It is my object to combine the pen and the means aforesaid in such a manner as to admit of the solid ink being renewed as often as required.

It is further my object to produce such a combination of the parts specified as will permit the pen to be removed and replaced without interference with the writing material or the means for holding the same.

In the drawings accompanying this specification there are shown articles in which both of the results above mentioned are arrived at.

The pens shown in the drawings are represented on an enlarged scale.

Figures 1, 2, and 3 are each a longitudinal central section of a pen embodying my invention.

In Figs. 1 and 2 the clasp that retains the ink-solid is part and parcel of the interior barrel or tube of the pen-holder.

Referring to these figures, A is the outer barrel of the pen-holder, and B is the inner barrel. Between the two the pen C is inserted and held in the usual way. Formed in one piece with the inner barrel B is an extension or tongue, D, whose outer end extends forward, so as to be in close proximity to the under side of the pen C, and this end is bent into tubular, or approximately tubular, form, to constitute a clasp which shall receive and hold the ink-solid *d*. This ink-solid is in the shape of a stick, like a pencil-lead or a crayon, and can readily be inserted in, or withdrawn from, the clasp. When in place it is in contact, or almost in contact, with the under side of the pen, and is so positioned that when the pen is dipped in liquid—as, for instance, water—the liquid taken up will dissolve a portion of the writing material, thus producing a writing-fluid which will produce marks like those of ink.

The ink-solid I in preference use possesses copying properties, being composed of aniline combined with white clay and gum, or other suitable base or binding medium—such a core or stick, for instance, as is found in the "ink copying-pencil," so called, now in market.

In each Fig. 1 and 2 the clasp is made in one piece with the inner barrel of the holder, the two clasps differing only in form. Fig. 4 is a perspective view of the inner barrel in Fig. 1, detached from the other parts of the pen.

I prefer that the tongue D should be a spring, or have a slight spring action, so as to have a slight bearing at its point against the pen.

It is also preferred that the jaw of the clasp or tube should be somewhat elastic, so as to take better hold on the ink-stick. In Fig. 3 the device for holding the ink-solid is made of wire, E, bent at its front end to form a hook or ring, or segment of a ring, sufficient to receive and hold the ink-stick *d*, which, by the spring action of the wire, is held up against the under side of the pen, as shown. The inner end of the wire is made fast to the pen-holder, and when, as in the present case, the holder is arranged to slide in a case, F, the wire can extend out into and through the sliding ring

G, thus forming the bond of union between the holder and the external ring, by which the holder is moved.

The outer end of the wire spring may, if preferred, be formed only with a slight bend or concave sufficient to fit the ink-stick, which, in this case, will be held in place by the pressure of the spring between said spring and the pen. Fig. 5 is a detached view of the inner barrel and the spring-clasp. (Shown in Fig. 3.)

I would remark that the clasp may be attached not only to the holder, but also to the handle, or to the pen itself. I prefer, however, on most accounts, to attach the clasp to the holder.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, substantially as set forth, of the pen, the clasp, and the detachable and removable ink solid or stick, received and held by said clasp.

2. A pen-holder whose inner barrel is formed with a tongue or extension, constituting a clasp to receive and hold an ink solid or stick, substantially as shown and set forth.

3. The combination, as herein set forth, of the pen-holder, the pen proper, and the ink-solid spring-clasp, arranged to bear against or toward the under side of the pen with a yielding pressure, as and for the purposes specified.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

HENRY C. BENSON.

Witnesses:

S. BRAISTED,

LEONARD REINDEL.