

*N. A. Prince,
Fountain Pen.*

No 2399.

Patented Sept. 30. 1851

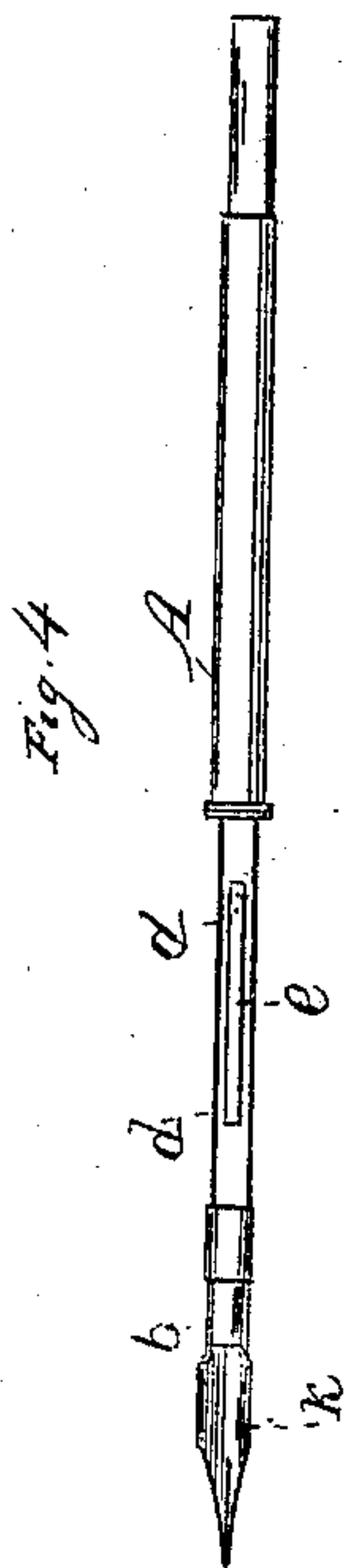
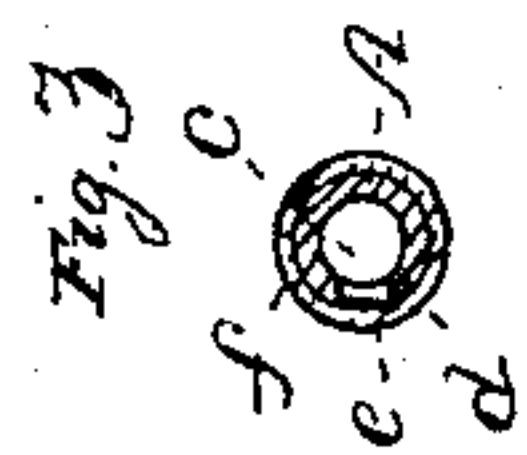


Fig. 2

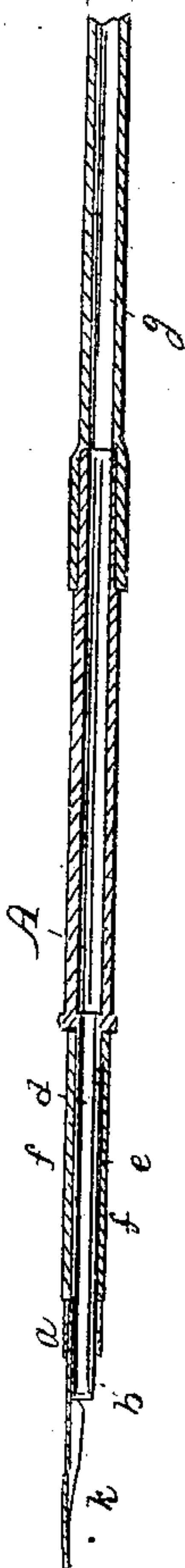
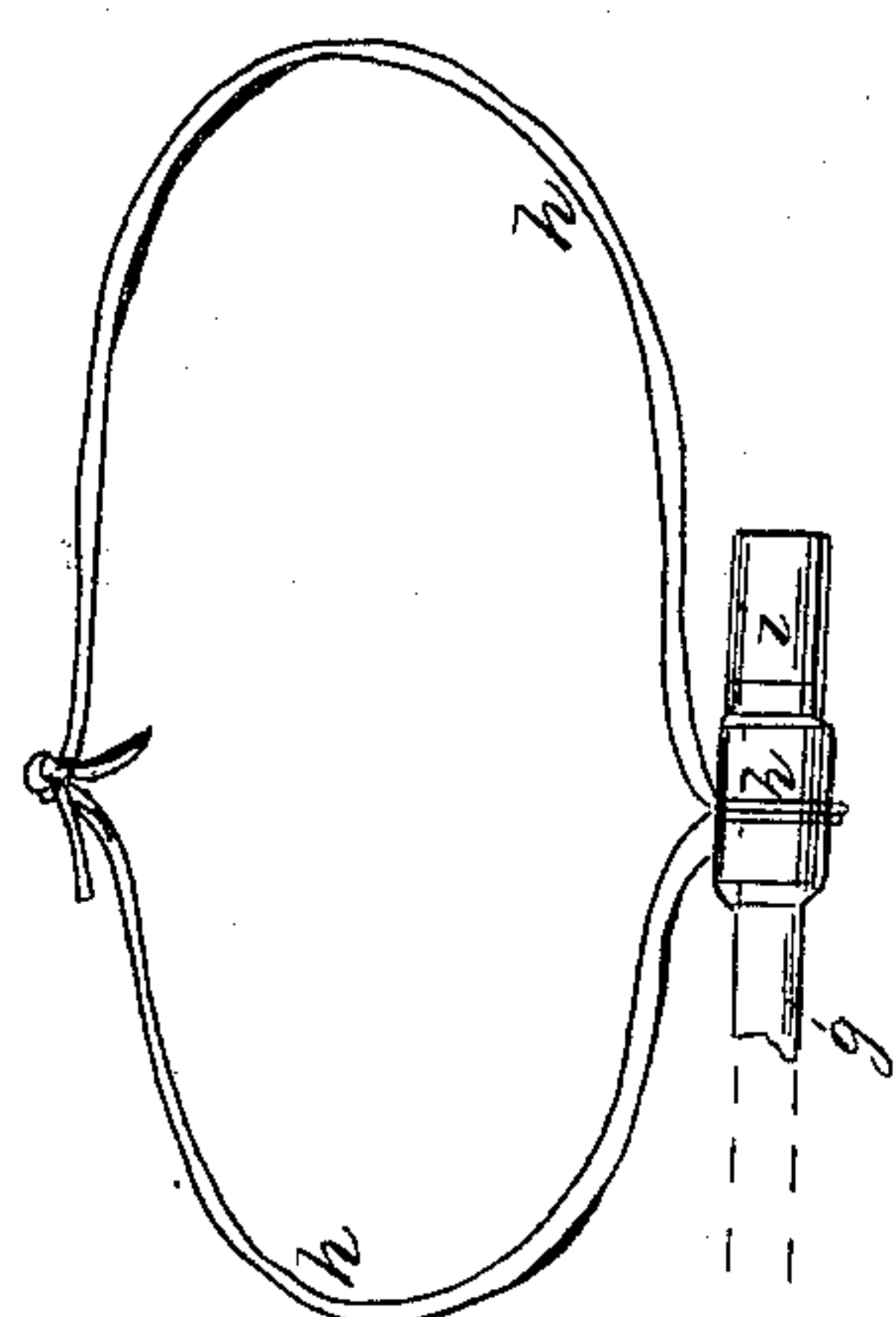
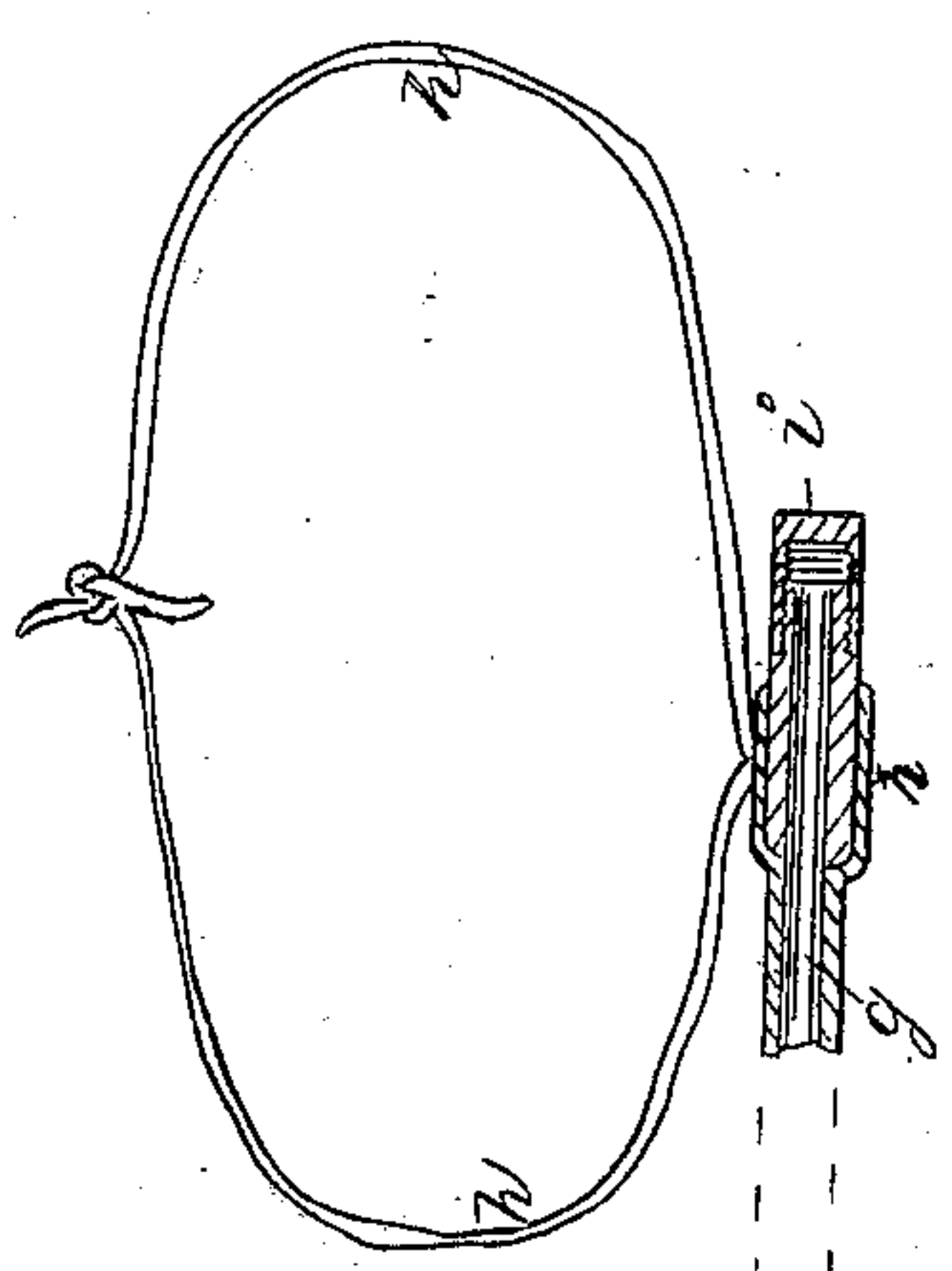


Fig. 1



UNITED STATES PATENT OFFICE.

NEWELL A. PRINCE, OF NEW GLOUCESTER, MAINE.

IMPROVEMENT IN FOUNTAIN-PENS.

Specification forming part of Letters Patent No. 8,399, dated September 30, 1851.

To all whom it may concern:

Be it known that I, NEWELL A. PRINCE, of New Gloucester, in the county of Cumberland and State of Maine, have invented a new and useful or Improved Self-Supplying or Fountain Pen; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Figure 1 of the said drawings represents a side elevation of my improved pen; Fig. 2, a central and longitudinal section of it. Fig. 3 is a cross-section of it, taken through the spring and its elastic cover, to be hereinafter described. Fig. 4 is a side view of the spring and metallic tube, to which it is applied, as it appears when divested of the elastic cover.

In the said drawings, A represents a tube about five inches in length and made of silver or some other proper inflexible material. It has a suitable socket made upon or near one end of it for the reception and holding of a common metallic writing-pen *k*, such socket being seen at *a*. A portion *b* of the tube extends down toward the point of the pen and a short distance from the socket *a*, and is provided with a fine or very small hole *c*, made through its external end. Above the socket and where the pen tube or handle A would be grasped by or between the fingers in the act of writing the said tubular handle A has a long slot *d* made through it, to which a metallic spring *e* is applied, as seen in Figs. 2, 3, and 4, one or both ends of the spring being secured to the tube A. The spring should be made of a width somewhat less than that of the slots, in order that when pressure is produced on the middle of the spring, so as to force it inward or toward the axis of the tube A, such spring may readily enter the slot. An elastic or flexible tube or cover *f*, made of gum-elastic or some other proper material, is placed over and around, or is made to inclose the spring and tube and be confined to the tube at its two ends by being firmly bound to the tube by a band of thread or by being cemented or confined in any other proper manner, it being understood that such cover is to be so made and applied to the tubular handle A as not only to prevent any liquid from escaping outward through the slot and getting upon the external surface of the han-

dle, but so as to prevent passage of air through the slot. The elastic spring is to be so arranged that the thumb of the person who may write with the pen is to rest in contact with the external surface of that part of the cover *f* which lies directly upon it, and thus to enable the writer by pressure of his thumb to force the spring inward.

The tubular handle A is made hollow and of sufficient capacity to contain a considerable quantity of ink, or, in other words, it is to be a reservoir of ink; but in order to enable it to contain a very large or extra quantity of ink I make part of the tube of metal and another part, as seen at *g*, of india-rubber or some other proper flexible material, and of a length sufficient to extend upward and be fastened by suitable straps or attachments *h h* to the arm of the writer and in such manner as to admit of the free and necessary movements of the pen and inflexible part of the handle. The upper end of the tube should be provided with a screw-cap *i* or some other suitable contrivance for either opening or closing it, and this for the purpose of filling the tube with ink whenever necessary. The cap should be fitted air-tight.

The pen or writing apparatus being made in the above-described manner, it will be seen that when the tubular handle is supplied with ink or writing-fluid a very slight pressure on the elastic spring, or that part of the elastic cover directly over or upon it, will cause that spring to move inward in such manner as to diminish the capacity of the tube and cause a corresponding flowage or discharge of ink out of the orifice *c* and upon the inner surface of the pen *k*. As the liquid immediately after its discharge flows downward toward the point of the pen, a bubble of air will pass into the orifice the moment the above-mentioned extra pressure of the thumb is taken off the spring or the flexible cover, and will supply the place of the ink previously discharged. Another like pressure of the thumb will effect similar consequences, until the whole amount of ink in the tubular handle has been consumed.

Instead of but one spring and its slot, as described, the tubular handle may be provided with a second spring and slot placed on the opposite side of it and where the forefinger of the writer's hand could naturally

and conveniently act against it, while the handle was pinched between the said finger and the thumb of the writer. This, however, is but a duplication of a part of my invention and a mere matter of form or construction.

I would remark that the spring may be dispensed with and the slot and flexible cover used alone, the object of the spring being to insure the reaction of the flexible cover, or its return to its original position directly after each pressure of the thumb on it, as stated.

What I claim as my invention is—

The improvement of the hollow flexible and long extension of the reservoir or tube, as seen at *g*, to extend up and be secured to the arm of the writer, substantially in manner and for the purpose as specified.

In testimony whereof I have hereto set my signature this 13th day of February, A. D. 1851.

NEWELL A. PRINCE.

Witnesses:

R. H. EDDY,
CALEB EDDY.