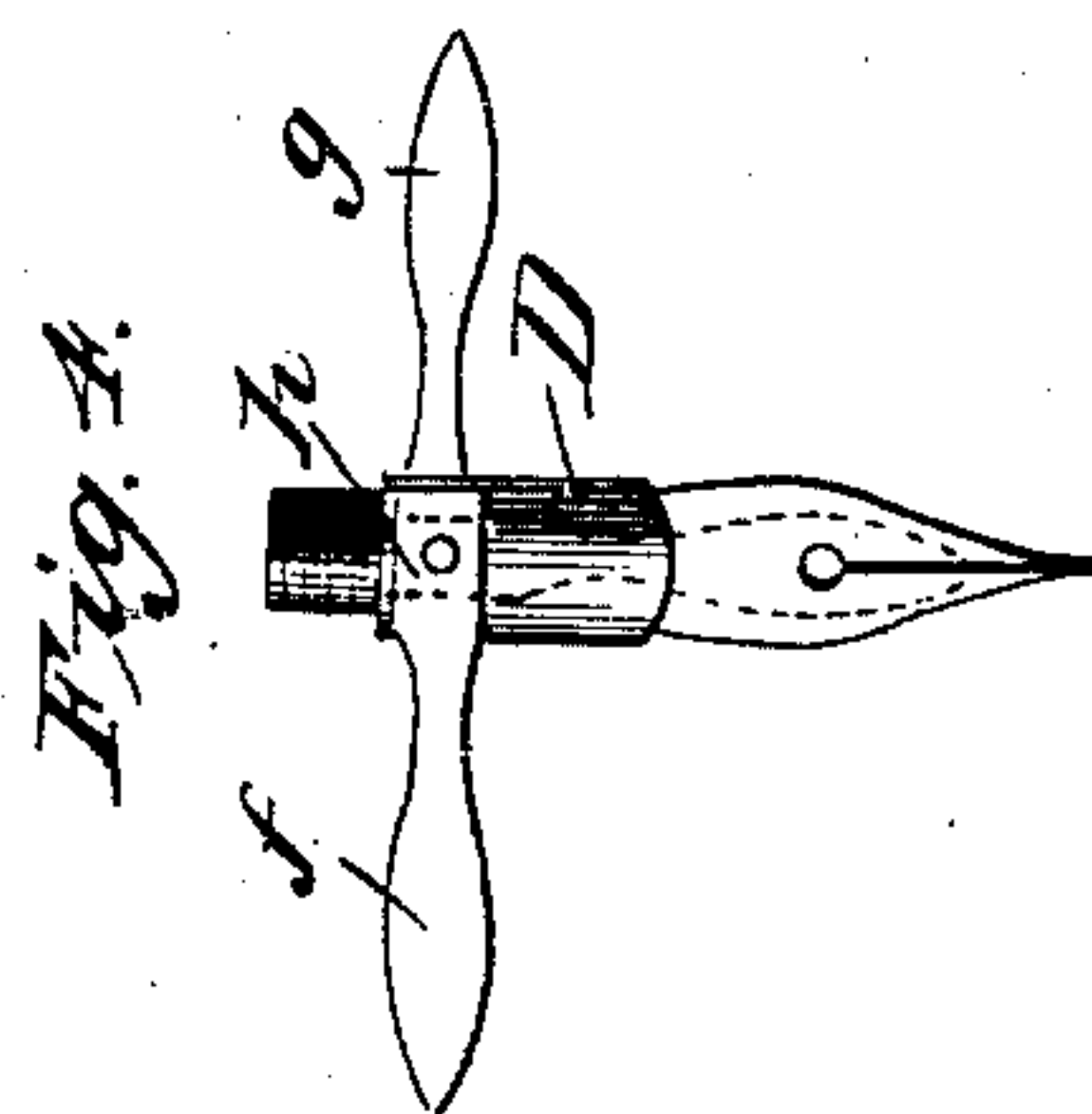
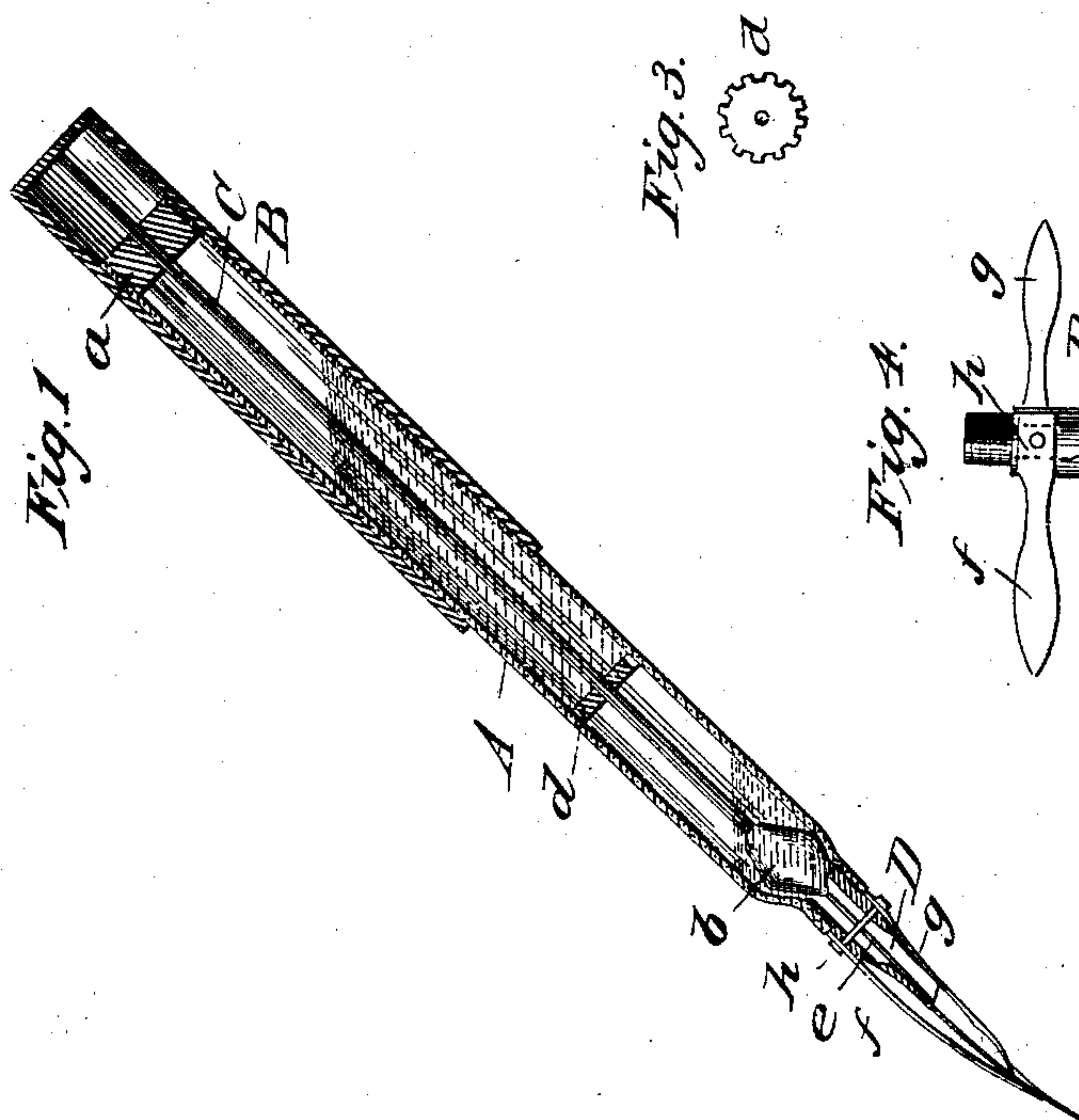
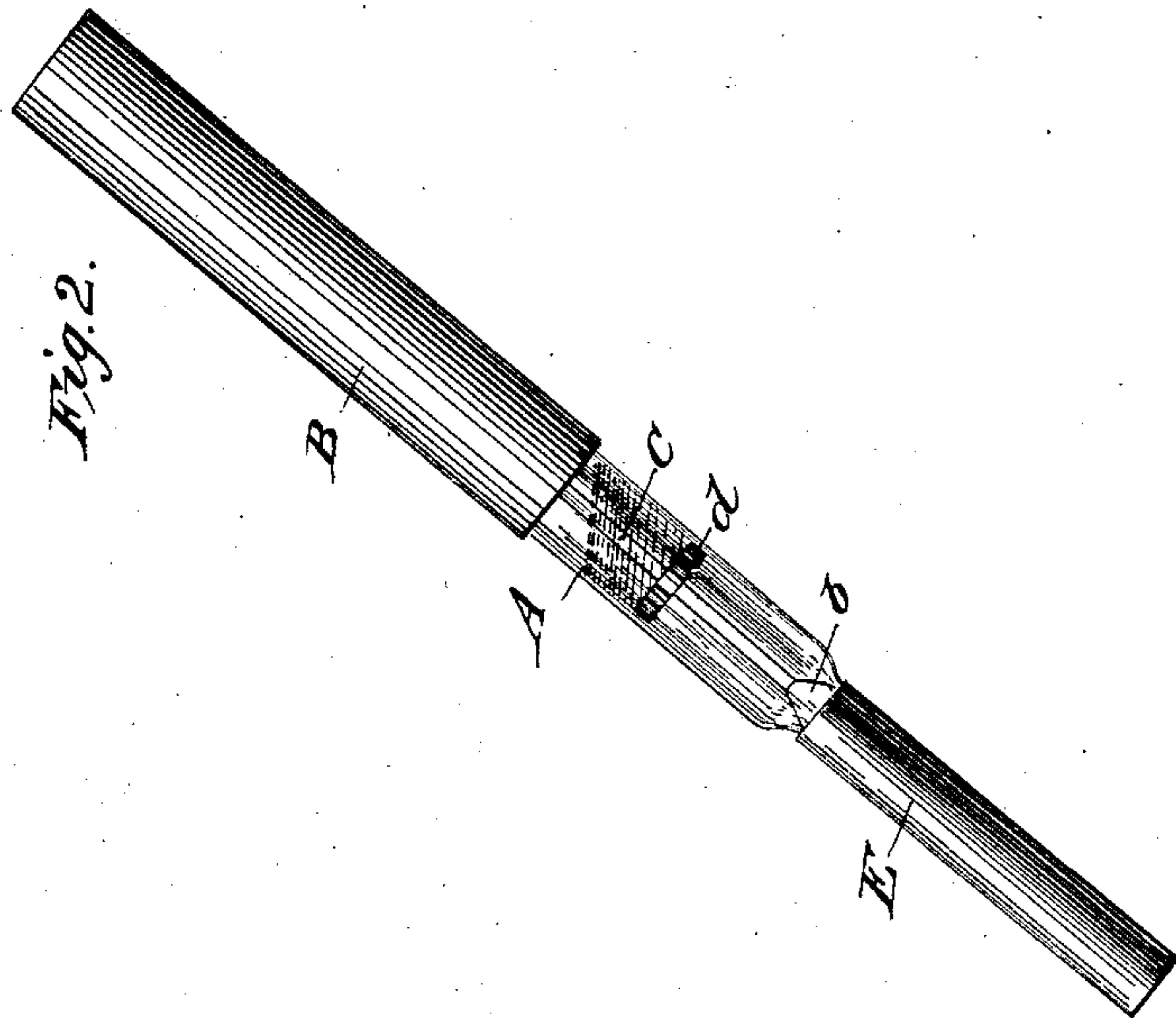


A. F. WARREN.  
PEN.

No. 18,365.

Patented Oct. 6, 1857.





# UNITED STATES PATENT OFFICE.

A. F. WARREN, OF BROOKLYN, NEW YORK.

## FOUNTAIN-PEN.

Specification of Letters Patent No. 18,365, dated October 6, 1857.

*To all whom it may concern:*

Be it known that I, A. F. WARREN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Fountain-Pen; and I 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 central section of my improvement, arranged ready for use. Fig. 2 is an external view of ditto, with the tube placed over the pen so that the implement may be carried in the pocket. Fig. 3 is a detached face or side view of the cut-off valve. Fig. 4 is a detached view of the pen-holder, with the plates turned outward from the holder and pen, the pen being inserted in the holder.

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

The object of this invention is, 1st, to feed or supply the pen with ink regularly or evenly, and thereby obviate the objection attending the ordinary fountain pens, the objection being occasioned by the varying pressure of the ink within the tube or fountain produced of course by the using of the same therefrom. This part of the invention consists in having the valves placed within the tube or fountain, both of which are attached to one and the same rod, and so arranged that while one valve serves to regulate the size of the discharge orifice through which the ink flows to the pen the other serves as a cut-off and isolates a small quantity of ink in the lower part of the tube or fountain from the portion above it. By this means the ink is not forced or fed to the pen under a variable pressure, and the lower part of the tube may be readily supplied with ink from time to time as occasion requires.

The object of the invention, 2nd, is to arrange the plates which are attached to the pen in such a way that the pen, when foul, may be readily cleansed. This is accomplished by pivoting said plates to the pen so that they may, when the pen is detached from the tube or fountain, be turned around leaving the pen fully exposed as will be presently shown and described.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a tube which serves as the

fountain and also as the handle of the implement. On the upper part of the tube A, a tubular slide B is fitted. The slide has a rod C, attached to the inner side of its top or upper end, and this rod passes through a small stuffing box, *a*, in the upper end of the fountain A, and into the fountain. The rod C, has a conical valve, *b*, on its lower end, said valve having a corresponding shaped seat at the lower end of the fountain through which an opening is made.

On the rod C, a short distance above the valve, *b*, a valve, *d*, is placed. This valve has its edges serrated, as shown clearly in Fig. 3, and is fitted snugly within the chamber A. To the lower end of the valve, *b*, a wire, *e*, is attached, said wire extending some distance beyond the end of the tube or fountain.

Into the lower end of the tube or fountain A, a pen-holder D, is screwed. This pen-holder is of the usual form, but is hollow, and the wire, *e*, passes through it, the wire extending down to the lower end of the holder D, see Fig. 1.

To the front side of the holder D, a plate, *f*, is pivoted, and a plate, *g*, is pivoted to the back side. These plates project, one over the front or concave side of the pen, E, which is fitted in the holder D, and the other projects over the back or convex side. These plates are allowed to turn on the pivot, *h*, which connects them with the holder. The plates are of the usual form and serve to retain a quantity of ink near the nib of the pen. They are, in fact, supplementary reservoirs or fountains placed contiguous to the nib to equalize the feed or supply of ink thereto.

The tube or fountain A, may be filled by unscrewing the holder D, from the tube, drawing back the tube B, and consequently the valves, *b*, *d*, and then inverting the tube and pouring the ink into it. The pen-holder is then screwed into the tube, and the valve, *b*, shoved down by moving the sliding tube B, until the orifice of the tube or fountain is closed. The tube is then held in a slightly inclined position, so that the ink will flow down upon valve, *d*, and the valves *b*, *d*, are then drawn gently backward, and as the valve, *d*, is moved back a quantity of ink will pass through the notches or spaces formed by the serrated edge of the valve, *d*, and pass into the lower end of the tube below the valve, *d*. When,



however, the motion of the valve, *d*, is stopped, the ink will cease to flow past or through it, in consequence of atmospheric pressure, and the ink below the valve will be isolated from that above it. The valve, *b*, may be adjusted to regulate the flow of the ink when the tube or fountain is filled, by inverting the tube or fountain and operating the sliding tube B. In Fig. 1, the ink above and below the valve, *d*, is represented by dotted lines.

From the above description it will be seen that the ink will be fed, regularly, or evenly to the pen in consequence of the small quantity immediately above it. Were the valve, *d*, not employed, the tube or fountain A, when full, would in consequence of static pressure be fed in undue quantities to the pen, and if the valve, *b*, be closed sufficiently to prevent this the orifice of the tube or fountain would soon become clogged by the crusting of the ink, especially if the pen be not kept in continual use.

The valve, *d*, it will be understood is moved from time to time, as occasion may require, to allow a portion of ink to escape below it.

The plates, *f*, *g*, serve the usual purpose of supplementary reservoirs or fountains as previously stated, but the plates hitherto employed have been permanently attached to the pen and consequently the pen could not be cleaned with facility. By having the plates attached to the pen holder D by means of the pivot, *h*, the plates may, when the holder D is unscrewed or detached from the tube A, be turned outward, as shown in

Fig. 4, and the pen and holder be perfectly exposed so that they may be readily cleansed. When the holder D is attached to the tube or fountain A, the plates, *f*, *g*, are prevented from moving casually, in consequence of the upper edges of the plates bearing against the end of the tube or fountain A, which is rather larger in diameter than the holder D, so that a shoulder is formed, against which the upper edges or ends of the plates, *f*, *g*, bear.

E is a tube or cap which is fitted over the pen and holder when the implement is not in use.

I do not claim the employment or use of a valve, *b*, placed at the discharge end or orifice of a tube or fountain A, to regulate the flow or supply of ink to the pen, for that has been previously used, but

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

1. The supplementary valve or cut-off, *d*, used in connection with the valve, *b*, both valves being within the tube or fountain A and placed on the same rod, C, substantially as and for the purpose set forth.

2. I do not claim, broadly, the plates, *f*, *g*, for they have been previously used, but I do claim attaching said plates, *f*, *g*, to the holder D, by means of the pivot, *h*, for the purpose specified.

A. F. WARREN.

Witnesses:

I. W. COOMBS,  
S. H. WALES.