

(No Model.)

J. MORTON.
FOUNTAIN PEN HOLDER.

No. 298,767.

Patented May 20, 1884.

Fig 1.

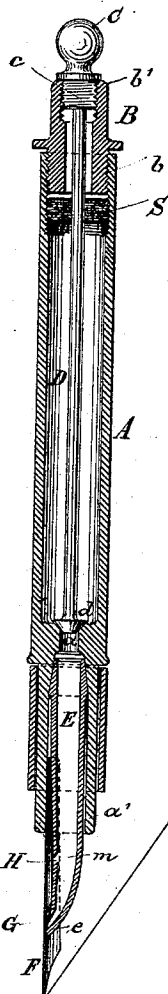


Fig 3.

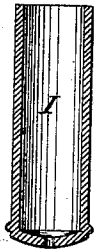


Fig 2.



Witnesses:
Edward Schifelt
Robt W Matthews

Inventor.
James Morton
by A. W. Amqvist
Attorney.

UNITED STATES PATENT OFFICE.

JAMES MORTON, OF NEW YORK, N. Y.

FOUNTAIN PEN-HOLDER.

SPECIFICATION forming part of Letters Patent No. 298,767, dated May 20, 1884.

Application filed April 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES MORTON, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fountain Pen-Holders, of which the following is a specification.

The object of my invention is to provide a fountain-pen of a simple and convenient construction, whereby the feeding of the ink to the point of the pen will be effected in sufficient and even flow by the ordinary slight bending of the pen due to the pressure exerted upon its point when writing and without the necessity of an elastic chamber or other device for producing the feed of the ink by compression of such chamber or its equivalent, and whereby the ink will be at all times prevented from leaking out at the upper end of the pen even when the latter is inverted and the cap unscrewed, and whereby, when the writing is finished, communication between the fountain and the feed-tube may be tightly and conveniently shut off to prevent any accidental leakage through the feed-tube.

The invention consists in the construction and combination of the various parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a longitudinal central section of my improved fountain pen-holder. Fig. 2 is a front view of the feed-tube, and Fig. 3 a longitudinal section of the cap by which the pen and feed-tube are covered when not in use.

A is the hollow stem of the holder, which also forms the fountain or reservoir for the ink. This is threaded on the inside a distance downward from its upper end to receive the threaded lower end, *b*, of the cap B. The cap B has a hole through its axis, which hole is enlarged and threaded at its upper end, *b'*, to receive the threaded shank *c* of the knob C. In a socket in the said knob C is fastened the upper end of a valve-rod, D, ending with a valve, *d*, which, when the knob C is screwed down far enough, closes a small central opening, *a*, which opening forms the communication between the fountain and the feed-tube. A cork, S, having a central perforation, by which it fits tightly upon the rod D, is inserted and screwed down to fit tightly in the upper end

of the reservoir below the cap B, as shown in Fig. 1, and does the service of a stuffing-box, to prevent any leakage of the ink even if the cap B be removed or the knob C entirely unscrewed in opening the valve, as when writing. From a little below the valve the channel *a* in the lower end of the nipple *a'* of the holder A is enlarged sufficiently to receive a feed-tube, E, having at least as large a channel in it as the channel *a*, and to leave a small annular space between the said tube and the inner circumference of the said enlargement or socket to receive and retain the pen F. This tube E is curved and tapers toward the point *e*, which lies in contact with the inner surface of the pen F, and has at the said point *e* the usual opening, G, for admitting ink to the pen. A little higher up from the point the front surface of the tube E is a little concaved, as shown in Fig. 1, so as to leave a small space between it and the inside of the pen for admitting air through a second small perforation, H. The cross-section of the channel in the tube E at the hole H is about four times as great in area as the narrowest portion of the feed-channel at the point of the pen, thereby allowing the ink and air to flow in opposite directions, the ink flowing down along that side of the channel marked *m* on any pressure which bends the pen away from contact with the point *e*, while air rises through the small perforation H at the opposite side of the tube, thus preventing stoppage of the flow by vacuum.

Where the air-hole H has heretofore been used it has been found necessary to produce the feed by compressing with the thumb and fingers an elastic chamber, through which the ink flows; but this is not necessary, and feed may be effected more perfectly and without the trouble of any extra pressure by simply making the belly of the feed-tube larger at *m* and maintaining or slightly increasing the bore of the tube E upward, as shown in Fig. 1, so that the proportion between the area of the same at and above the air-hole H will be to that of the narrowest part of the feed G about as stated.

When not in use, the pen and feed-tube are covered by the cap I, fitting tightly upon the outside of the nipple *a* in the usual manner.

In conclusion, I acknowledge the United States Patents Nos. 145,102, 18,365, and 222,959, and disclaim the construction shown in either of the said patents.

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

1. In a fountain pen-holder, the combination, with the hollow stem A, having the bottom channel, *a*, enlarged to receive the feed-tube and pen, as set forth, of the tube E, fitted with its inner end tightly and with its outer end loosely into the said enlargement, and the pen F, inserted between the said tube and enlargement, the said tube being of the curved and gradually-tapering shape shown, and being also provided with the feed-channel G and air-hole H, and having several times larger area of cross-section at and above the air-hole than across the narrowest part of the feed-channel, as and for
10
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20 the purpose set forth.

2. In a fountain-pen, the combination of the following elements: the hollow stem A, hav-

ing the bottom channel, *a*, enlarged to receive the feed-tube and pen, the feed-tube and pen E F, fitted in the said enlargement, as described, the valve-rod D, provided at its lower end with the valve *d*, and having at its upper end a threaded enlargement, *e*, and a knob, C, the perforated cap B, having an inside thread, *b'*, to receive the thread *e*, and an outside thread, *b*, by which it is fitted into the upper end of the stem A, and the packing S, fitted in the thread of the stem A, and surrounding tightly the valve-rod D, all constructed substantially as hereinbefore set forth. -

In testimony that I claim the foregoing as my invention, I have signed my name, in presence of two witnesses, this 7th day of April, 1883.

JAMES MORTON.

Witnesses:

ROBT. W. MATTHEWS,
A. W. ALMQVIST.