

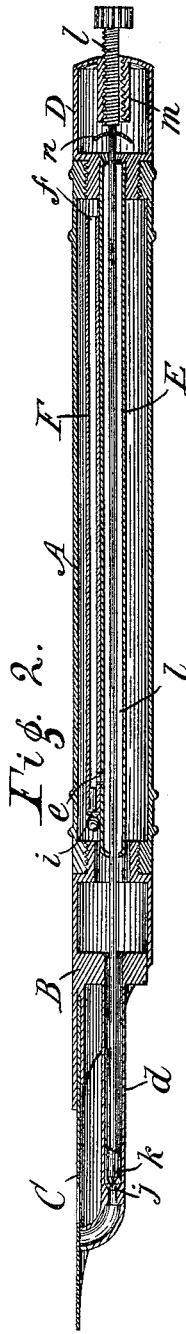
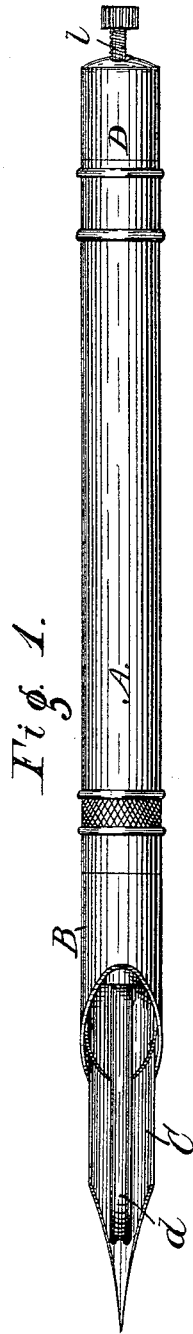
(No Model.)

W. H. HILDEBRAND.

FOUNTAIN PEN.

No. 348,395.

Patented Aug. 31, 1886.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILHELM H. HILDEBRAND, OF INDIANAPOLIS, INDIANA.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 348,395, dated August 31, 1886.

Application filed May 17, 1886. Serial No. 202,420. (No model.)

### *To all whom it may concern:*

Be it known that I, WILHELM H. HILDEBRAND, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Fountain-Pens, of which the following is a specification.

My invention relates to an improvement in that class of fountain-pens in which ink is supplied to the pen-point from a reservoir formed in the pen-stock.

The object of my improvement is to prevent variations of volume in the air contained in the ink-reservoir from interfering with the regular flow of the ink.

The accompanying drawings illustrate my invention.

Figure 1 is a front elevation. Fig. 2 is a longitudinal section at *a*, Fig. 1.

A is an open tube, which forms the ink-reservoir and also the pen-stock.

B is the pen-holder, which is adapted to receive and hold the ordinary pen-point, C. Said pen-holder is screwed into and closes one end of tube A, and a short tube, *d*, conducts the ink from the reservoir to the pen-point.

D is an air-chamber, which is screwed into and closes the upper end of tube A. A tube, E, of small diameter, extends from the bottom of chamber D nearly to the opposite end of the reservoir, and a second tube, F, is secured to the side of tube E, and communicates with the interior of said tube E at *e*, and with the reservoir at *f*. The lower end of tube F is closed by a plug, *i*, which, for the purpose of cleaning the tube, is removable. Near the lower end of tube *d* is a valve-seat, *j*, to which is fitted a conical valve, *k*. Valve *k* is mounted on a valve-rod, *l*, which passes through tubes *d* and E and air-chamber D, and out through a short tube, *m*, which has an interior screw-thread. The upper end of rod *l* is screw-threaded, and engages the tube *m*, the valve *k* being opened and closed by turning the rod. A portion of the screw-

threaded portion of rod *l* is cut away along one side, to permit the air to pass into or out of chamber D.

*n* is a cup-shaped collar secured to rod *l*, for the purpose of intercepting any ink which may work outward along the rod. The lower end of tube E is contracted so as to fit closely to the rod *l*, and prevent the ink from passing from the reservoir into said tube.

In operation, reservoir A having been nearly filled with ink, valve *k* is opened by screwing rod *l* outward, and the ink flows through tube *d*, and is discharged on the under side of the pen-point. As the ink flows out of reservoir A, its place is filled by air from chamber D, passing through tubes E and F to the upper part of the reservoir. In case the air in the reservoir becomes heated and thereby expanded, instead of causing a greater pressure on the ink, and an increased flow, as heretofore in this class of pens, the extra volume of air passes out of the reservoir through tubes F and E. With this construction, valve *k* having been once adjusted to permit the flow of a suitable supply of ink, a regular flow is maintained until the reservoir is emptied.

I claim as my invention—

1. In a fountain-pen, a reservoir, A, air-chamber D, and tubes E and F, communicating at *e*, all combined and arranged to co-operate as and for the purpose specified.

2. In a fountain-pen, the ink-reservoir, the air-chamber, tubes E and F, communicating at *e*, the detachable pen-holder having tube *d*, provided with an interior valve-seat, the valve, the valve-rod extending through tubes *d* and E, and means, substantially as shown and described, for adjusting said valve-rod and valve, all combined and arranged to co-operate as specified.

WILHELM H. HILDEBRAND.

Witnesses:

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