No. 648,839. Patented May 1, 1900.

C. W. BOMAN.

FOUNTAIN PEN.

(Application filed Mar. 10, 1900.)

(No Model.)

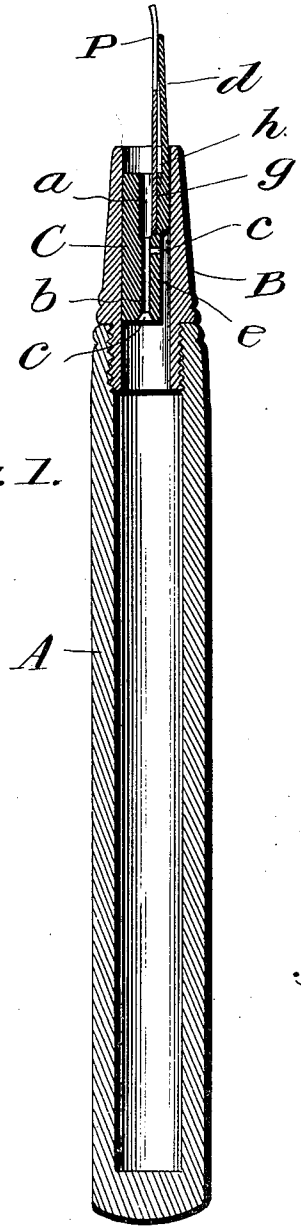



Fig. 1.

Fig. 2.

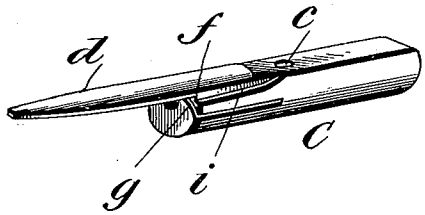



Fig. 3.

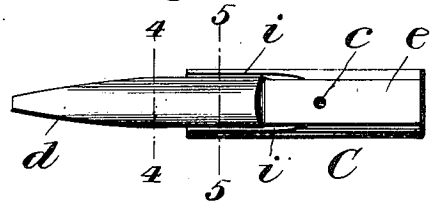



Fig. 4.

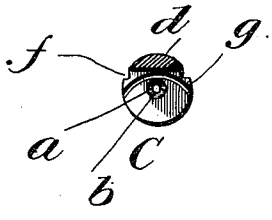
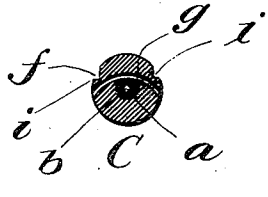



Fig. 5.




WITNESSES:

L. C. Hills

Estella Beck

INVENTOR:

Claes W. Boman.

BY Marcellus Bailey

his Attorney

# UNITED STATES PATENT OFFICE.

CLAES W. BOMAN, OF NEW YORK, N. Y., ASSIGNOR TO THE EAGLE PENCIL COMPANY, OF SAME PLACE.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 648,839, dated May 1, 1900.

Application filed March 10, 1900. Serial No. 8,180. (No model.)

*To all whom it may concern:*

Be it known that I, CLAES W. BOMAN, a citizen of the United States, and a resident of New York, in the borough of Brooklyn and State of New York, have invented a new and useful Improvement in Fountain-Pens, of which the following is a specification.

My invention relates to the feed portion of a fountain-pen, the object being to obtain a regular and uniform "top feed" with a simple and efficient construction of the feed-plug for this purpose. This object is attained by a novel construction and arrangement of parts, which will first be described in connection with the drawings accompanying and forming part of this specification and will then be more particularly pointed out in the claims.

In said drawings, Figure 1 is a longitudinal axial section of the complete pen. Fig. 2 is an enlarged perspective view of the feed-plug detached. Fig. 3 is a plan view of the same. Figs. 4 and 5 are cross-sections on lines 4 4 and 5 5, respectively, of Fig. 3.

A is the tubular barrel or handle, which in this instance constitutes the ink-reservoir. It is closed at its rear end, and into its front end is screwed the usual nozzle B, in which fits the feed-plug C. The body of the plug fits tightly in the nozzle. The air-passage on the plug is distinct and separate from the passage or passages through which ink flows to the pen. It may be of any suitable or desired construction, but preferably is formed as set forth in United States Letters Patent No. 634,398, issued to D. C. Demarest October 3, 1899, consisting of a duct formed in and lengthwise of the plug and of two different diameters, the part *a* of larger diameter being at the front and the part *b* of smaller diameter at the rear, the latter part communicating with the interior of the reservoir through a plurality of holes *c*, one of which is formed in this instance in the rear end of the plug and the other of which is formed in the side of the plug at a point *e* near the butt of the plug, where the body of the plug is cut away laterally, so as to allow communication between the air-hole *c* at this point and the interior of the reservoir.

The plug is provided at the front with a forwardly-extending strip *d*, which is somewhat resilient and constitutes the top-feed finger. It is preferably made integral with the body of the feed-plug.

In the front of the feed-plug above the air-duct and far enough below the feed-finger to leave an appreciable space between it and the heel of the feed-finger is formed the pen-retaining slot *g*, in which the pen P is inserted and held. When the pen is inserted in place, the arrangement is such that there is a space *h* between the pen and the heel of the feed-finger which constitutes an ink-receiving space, while the pen and finger as they extend forward from that point approach one another and lie in close contact with each other. This ink-space is bounded on the sides by the walls of the nozzle, which prevent any escape of the ink in that direction and direct it downward or forward to the slit pen-point between the pen below and the feed-finger above. It is preferred to slightly notch or recess the front end of the plug, as at *f*, immediately below the feed-finger *d* and at a point above the pen-slot *g*, so as to form the ink-space in part between the feed-finger and the body of the plug itself. Ink is led from the reservoir into this space by one or more ducts *i*, two in this instance, which are small and are formed in the exterior of the plug, extending longitudinally from the recess *e* in the back portion of the plug to the ink-space *h*, into which they open at the heel of the feed-finger, one on each side thereof.

The feed-finger for a portion of its length fits into and is in contact with the internal wall of the nozzle B, (for which purpose the external surface of this portion of the finger is of conforming shape to the nozzle,) so as to prevent it when in use from breaking off at the point where its heel joins the body of the feed-plug.

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

1. In a fountain-pen, the combination with the ink-reservoir and the nozzle, of a feed-plug having a longitudinal air-duct separate from and independent of the ink-supply duct and formed with a feed-finger *d* which extends beyond the front end of the plug to

overlie the pen and bear upon the front portion of the latter, a pen-slot *g* in its front end located some distance below the feed-finger so that when the pen is inserted in place there shall be at the front of the plug and between the rear portions of the feed-finger and pen an ink-receiving space, and one or more ink ducts or passages leading from the ink-reservoir into said ink-receiving space, as and for the purposes hereinbefore set forth.

2. In a fountain-pen, a feed-plug having a longitudinal air-duct separate from and independent of the ink-supply duct, and provided at its front with the pen-slot *g*, the recess *f* above said slot, the feed-finger joined at its heel to the body of the plug at a point above the said recess, and one or more ducts *i* for conducting ink from the reservoir into said recess, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 27th day of February, 1900.

CLAES W. BOMAN.

Witnesses:
SAMUEL KRAUS,
P. H. BUCKMASTER.