

C. W. BOMAN.
FOUNTAIN PEN.

(Application filed June 30, 1898.)

(No Model.)

Fig. 1.

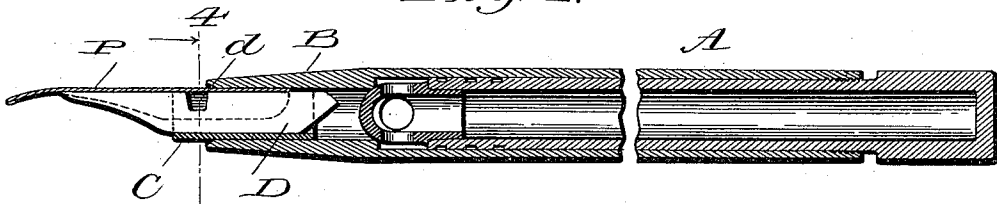


Fig. 2.

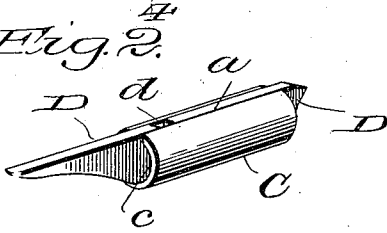


Fig. 3.

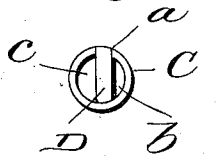


Fig. 4.



Fig. 5.

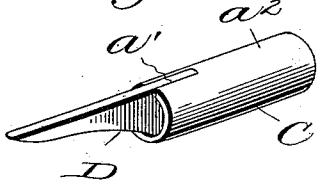


Fig. 6.

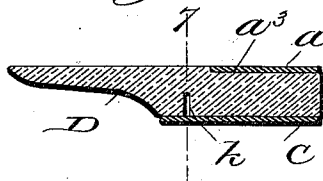


Fig. 7.

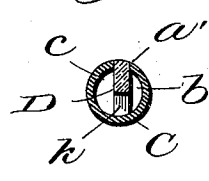


Fig. 8.

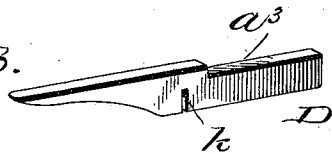


Fig. 9.

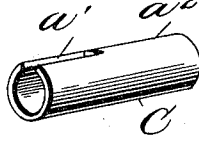


Fig. 10.

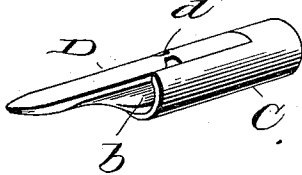


Fig. 11.

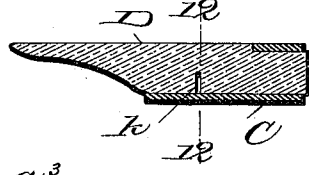


Fig. 12.

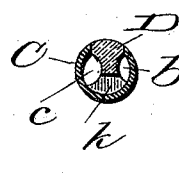


Fig. 13.

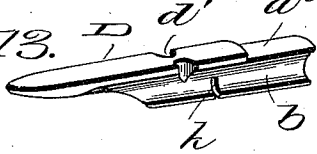
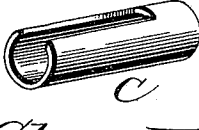


Fig. 14.



Inventor

Claes W. Boman,

By Marshall Bailey
his Attorney

Witnesses

L. C. Hills.
E. W. Hill

UNITED STATES PATENT OFFICE.

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

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 610,428, dated September 6, 1898.

Application filed June 30, 1898. Serial No. 684,836. (No model.)

To all whom it may concern:

Be it known that I, CLAES WILHELM BOMAN, of the city, county, and State of New York, have invented a certain new and useful Improvement in Fountain-Pens, of which the following is a specification.

The invention relates to fountain-pens, and has particular reference to a device by which the ink is conducted to the reservoir and supplied to the pen. The device consists of a plug composed, essentially, of a longitudinally-slotted tube and a partition-like tongue inserted in said tube which enters and fits the slot in the tube and also fills the major portion of the interior of the tube, leaving only small channels, one on each side of the tongue, for the passage of ink from and air to the ink-reservoir. The plug is intended to fit in the front end of the pen holder or handle, and the pen is inserted and held between the handle or holder and the plug with the front end of the tongue extending under the writing-point of the pen.

In the drawings accompanying and forming part of this specification, Figure 1 is a longitudinal central section of the complete pen with the feed-plug partly in elevation. Fig. 2 is a perspective view of the plug shown in Fig. 1. Fig. 3 is a rear end view of the same. Fig. 4 is a cross-section on line 4 4, Fig. 1. Fig. 5 is a perspective view of a modified form of feed-plug. Fig. 6 is a longitudinal axial section, and Fig. 7 is a cross-section, of the same, the latter on line 7 7, Fig. 6. Figs. 8 and 9 are perspective views of the two parts of this plug detached from one another. Fig. 10 is a perspective view of still another modified form of the plug. Fig. 11 is a longitudinal axial section, and Fig. 12 is a cross-section, of the same, the latter on line 12 12, Fig. 11. Figs. 13 and 14 are perspective views of the two parts of the plug detached from one another.

Like letters of reference indicate corresponding parts in all the figures.

The particular penholder A in connection with which my present invention is illustrated is that which is the subject of United States Letters Patent No. 599,592, granted to my assignee, the Eagle Pencil Company, on Febru-

ary 22, 1898; but my invention is of course applicable to other fountain penholders or penhandles as well.

B is the front end of the handle in which the feed-plug is inserted, the pen P being held in the usual way between the plug and the handle.

The plug consists of the tube C and the tongue D, both of which are preferably made of hard rubber. The tube C is longitudinally slotted, as at *a*, and the tongue D is inserted and fitted into the tube through this slot. The tongue for that portion of it which is within the tube is of substantial rectangular cross-section having parallel sides and top and bottom edges which are slightly transversely curved or rounded, so as to conform to the curve of the tube. When the tongue is in place, its outer longitudinal edge is flush with and forms in effect a continuation of the periphery of the tube. In this position it fits snugly in and closes the slot *a* and in effect is a partition which fills all of the interior of the tube save two narrow spaces *b c*, one on each side of the tongue, which form small channels through which ink and air can pass from and to the ink-reservoir in the handle. Of these channels the channel *b*, which is designed to conduct ink from the reservoir, is of smaller size than the channel *c*, through which air will be taken, and the tongue is so formed and proportioned and located as to secure this difference in the size of the two channels. I can, if desired, form a notch *d*, as shown, in the top edge of the tongue, to communicate with the channels *b c*, although this is not indispensable. The front end of the tongue, which projects beyond the tube and lies under the writing-point of the pen, is tapered from the under side to a point to which flows the ink supplied through the ink-channel in the plug.

The form of feed-plug shown in Figs. 5 to 9, inclusive, does not materially differ from that shown in Figs. 1 to 4, inclusive, and already described, save that in it, instead of forming in the tube C a slot *a* which extends throughout the length of the tube, I form in the tube C a slot *a'*, which extends only part

way of the length of the tube from the front end of the latter, leaving at the rear of the tube a solid or uncut portion a^2 . In this modified construction the heel or rear end of the tongue is cut away, as shown at a^3 , so that when the tongue is inserted in place in the tube this cut-away portion a^3 of the tongue will pass under the uncut portion a^2 of the tube, which forms a shoulder against which the jog on the upper edge of the tongue will bring up. In this way the tongue is held more securely in place against accidental displacement, while at the same time it still can readily be removed from the tube for cleansing purposes. I prefer to form in the under edge of the tongue a cross cut or kerf k to aid in the feeding action and measurably to make the tongue more yielding. The depth of the kerf preferably should not exceed half the width of the tongue. This kerf can also be formed in the tongue shown in Figs. 1 to 4, if desired.

The form of feed-plug shown in Figs. 10 to 14 differs from that shown in Figs. 5 to 9 in that the tongue for that portion of it which is within the tube is of the full size of the inside of the tube, and the channels $b c$ are cut or formed in the sides of the tube itself. This form of tongue has the advantage of presenting a broader surface to the under side of the writing-point of the pen. The notches $d' d'$, which in this modification are formed in the tongue, answer the same purpose as the notch d in the form of plug represented in Figs. 1 to 4.

A feed-plug of the kind hereinbefore described offers the great advantage that its parts can be readily put together and taken apart and can be cleansed at any time with the utmost facility. The device besides is

exceedingly simple and can be made at small cost.

Having described my invention and the best way now known to me of carrying the same into effect, what I claim as new, and desire to secure by Letters Patent, is—

1. An ink duct or feeder for fountain-pens composed of a longitudinally-slotted tube and a partition-like feed-tongue filling said slot and inserted in said tube, substantially as and for the purposes hereinbefore set forth.

2. An ink duct or feeder for fountain-pens composed of a longitudinally-slotted tube and a partition-like feed-tongue filling said slot and inserted in said tube and dividing the interior of the latter longitudinally into a small channel b , and a relatively larger channel c , substantially as and for the purposes hereinbefore set forth.

3. An ink duct or feeder for fountain-pens composed of a longitudinally-slotted tube and a partition-like feed-tongue filling said slot and inserted in said tube, and having in its under edge a cross-cut or kerf k , substantially as and for the purposes hereinbefore set forth.

4. An ink duct or feeder for fountain-pens composed of a tube longitudinally slotted from its front end for a portion of its length, and a partition-like feed-tongue inserted in said tube filling said slot, and having a notched or cut-away rear end which passes beneath the uncut portion of the tube to the rear of the slot therein, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 28th day of June, 1898.

CLAES WILHELM BOMAN.

Witnesses:

SAMUEL KRAUS,
P. H. BUCKMASTER.