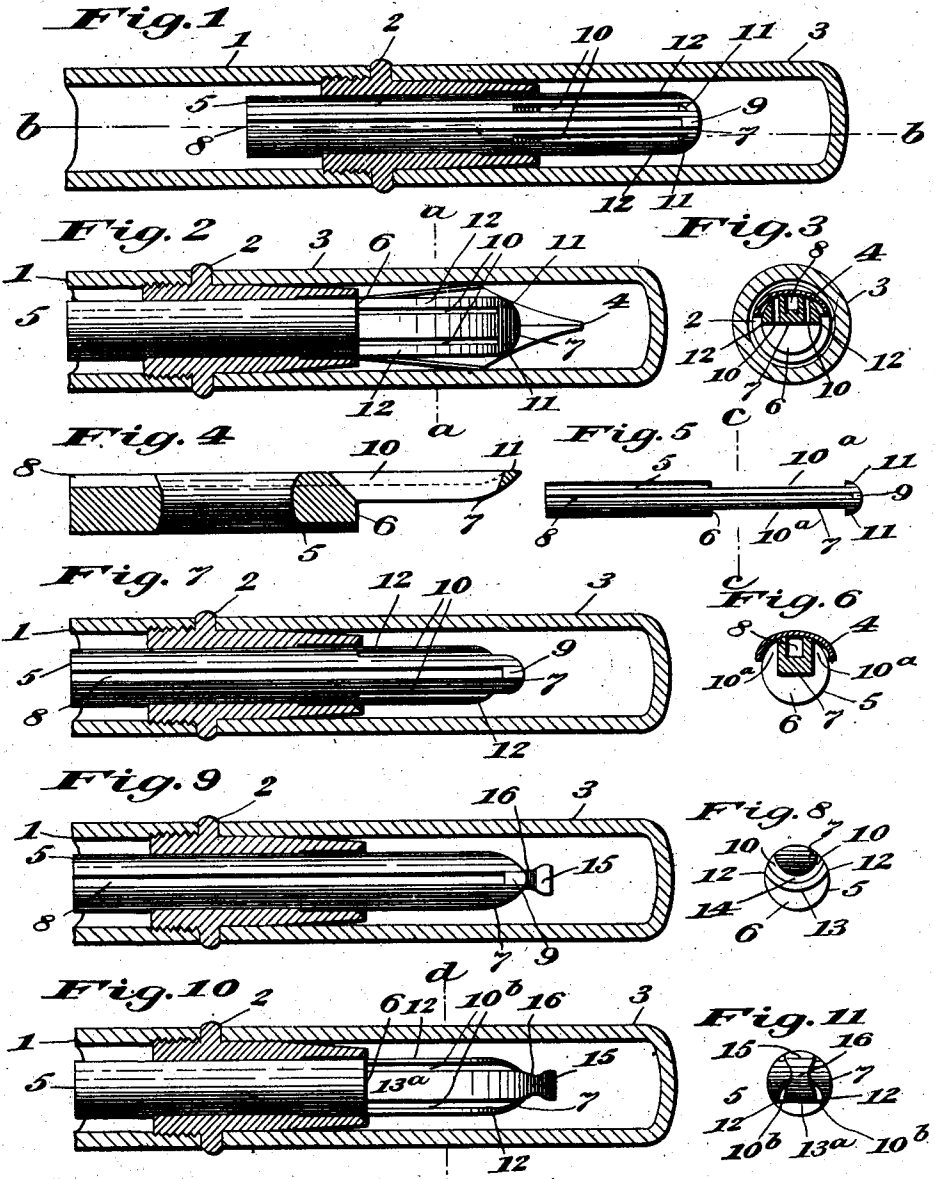


O. E. WEIDLICH,
FOUNTAIN PEN.

APPLICATION FILED NOV. 19, 1903.

NO MODEL.



Witnesses
 Melian Schuchardt
 L. W. Brown.

Inventor
 Otto E. Weidlich,
 By John Elias Jones,
 Attorney.

UNITED STATES PATENT OFFICE.

OTTO E. WEIDLICH, OF CINCINNATI, OHIO.

FOUNTAIN-PEN.

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To all whom it may concern:

Be it known that I, OTTO E. WEIDLICH, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to certain improvements in fountain-pens, and more particularly in the feeding devices commonly employed therein for feeding the ink from the reservoir to the pen-point; and the object of the invention is to improve and simplify the construction of such feeding devices in such a way as to afford means for preventing the dropping of ink from the pen-point in case the ink is fed too freely at times, whereby the operation of such feeding devices is improved and the writing is rendered uniform and regular and blotting caused by such dropping of surplus ink from the pen-point is avoided.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved feeding devices whereby certain important advantages are attained and the devices are rendered simpler, cheaper, and otherwise better adapted and more convenient for use than various other similar devices heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a sectional view taken axially through the end portion of a fountain-pen provided with feeding devices embodying my invention and showing in elevation the upper face of said feeding devices. Fig. 2 is a view similar to Fig. 1, but illustrating in elevation the lower face of the feeding devices of the pen. Fig. 3 is a transverse section taken through the feeding devices in the plane indicated by the line *a a* in Fig. 2. Fig. 4 is a view showing the feeding devices detached from the pen in sectional side elevation, the two end portions of such devices being in section in the plane indicated by line *b b* in Fig. 1. Fig. 5 is a view showing in plan and detached from the pen a feed-

ing device constructed in a modified form and embodying my invention, this form of the device being especially designed for use in connection with pen-points of small size. Fig. 6 is a transverse section taken through the form of feeding device shown in Fig. 5 in the plane indicated by line *c c* in said figure, the device being shown in connection with a pen-point. Fig. 7 is a view similar to Fig. 1, but illustrating a modified form of the feeding devices; and Fig. 8 is an end elevation of the feeding device illustrated in Fig. 7. Fig. 9 is a view similar to Figs. 1 and 7, but showing another modified form of the feeding devices; and Fig. 10 is an under side view of the same similar to Fig. 2. Fig. 11 is an end elevation of the feeding device as shown in Figs. 9 and 10. Fig. 12 is a transverse section taken through the feeding device as illustrated in Figs. 9, 10, and 11, the plane of the section being along line *d d* in Fig. 10. Fig. 13 is a transverse section showing still another modified form of the improved feeding device.

As shown in the views, and referring particularly to Figs. 1, 2, 3, and 4 of the drawings, 1 indicates the reservoir of a fountain-pen, and 2 indicates the screw-plug commonly employed for closing the open end of the same and for holding the pen and feeding devices, and 3 indicates the removable cap adapted to fit upon said plug to guard or shield the pen-point 4 when the device is not required for use. 5 indicates the feeding device as a whole, said device being in the form of a cylindrical rod or piece passed through the plug 3 and having a shoulder 6 at the forward end of said plug, being provided above said shoulder 6 at its said forward end with a projecting tongue or feeder 7, the upper surface of which is made convex to conform to the perimetral surface of the body portion 5 and to the under side of the pen-point 4, which is fitted in the screw-plug 2 above said convex surface, with its nibs projecting, as shown in Fig. 2, in position for use in writing. The cylindrical part 5 is provided with a longitudinal feed-groove 8, extended centrally along its upper surface, the forward end of said groove being also extended longitudinally along the central part of the convex upper face of the feeder 7, as clearly seen in

Fig. 1, to a point near but separated from the forward end of the feeder, as indicated at 9, at which point said forward end of the feeder is slightly flattened to permit the ink to be fed readily to the pen 4. The tongue or feeder 7 at the forward end of the body portion 5 is provided at opposite sides of its central feed-groove 8 with longitudinal slots or channels 10 10, parallel with the feed-groove and extended through said tongue or feeder from its upper to its lower surface, as illustrated in Figs. 3 and 4, and these slots or channels 10 10 form overflow chambers or receptacles in which is adapted to be received and held any surplusage of ink which may be fed to the pen-point from the groove 8 over and above what is required or desirable for writing, such surplus ink flowing readily through the interstices between the pen-point and the convex upper face of the feeder or tongue 7 into the overflow-chambers, as will be readily understood. In this way it will be seen that the surplus ink over and above what is required in the use of the pen is carried to the overflow chambers or receptacles at opposite sides of the feed-groove and is prevented from running down and dropping from the nibs of the pen-point, so that the liability of drops of ink falling from the pen and forming blots in the use of the same is altogether avoided and the action of the pen during writing is made uniform and regular.

In the construction shown in Figs. 1 to 4 the grooves or channels 10 10 are closed at their forward ends, as seen at 11 11, by the forward extremity of the tongue or feeder 7, through which said slots or channels are not extended, and are also closed along their outer sides by the lateral portions 12 12 of said tongue or feeder, and said grooves or slots 10 10 are made quite narrow, so as to avoid liability of the ink contained therein dropping from the feeder during the use of the pen; but when the device is used in connection with small pens the closure of the outer sides of the grooves or slots by the lateral portions of the feeder is not essential, since the overhanging sides of the pen-point will rest closely adjacent to the sides of the feeder and will accomplish the same result.

In Figs. 5 and 6 I have shown a form of feeder of this nature, wherein the slots or channels 10^a 10^a are open along their outer sides, said open outer sides being adapted to be closed, as indicated in Fig. 6, by the overhanging sides of the pen-point, whereby the ink contained in the overflow-chambers thus produced will be held and prevented from dropping from the pen during writing.

In Figs. 7 and 8 I have shown another form of the improved feeding device, wherein the grooves or slots 10 10 at opposite sides of the feed-groove are formed between the tongue or feeder 7 and an auxiliary tongue or projection 13 extended from the body portion 5 of the

feeding device beneath the tongue or feeder 7, the under side of the feeder being in this case made convex and the upper surface of the auxiliary tongue being concaved to correspond with but spaced from said lower surface of the feeder to produce the overflow-chambers 10 10 between the opposite sides of the tongue or feeder 7 and the outer edge portions 12 12 of the auxiliary tongue 13. The central portion 14 of the space between the tongue or feeder 7 and auxiliary tongue 13 in this form of the device affords a communication between the two overflow chambers or grooves 10 10.

In Figs. 9, 10, 11, and 12 I have shown another form of the device, wherein the auxiliary tongue or projection 13^a is made with a convex upper surface, while the under side of the tongue or feeder 7 is concaved to produce the overflow chambers or grooves 10^b 10^b, which are thus disposed lengthwise upon the under side of the device, being connected centrally with each other, and the forward end of the auxiliary tongue or projection 13^a is curved upward, as seen at 15, and is arranged to engage under the pen-point at a location in advance of the forward end of the feeder 7, being spaced apart therefrom to permit the surplus ink to flow down within the grooves or chambers 10^b 10^b. The bent portion 16, at the forward part of the auxiliary tongue 13^a, is reduced in thickness to facilitate the downward flow of the surplus ink. The upwardly-curved portion 15 beneath the pen-point is in position to guide the surplus ink therefrom into the overflow-chambers when too much ink is supplied and at other times guides ink from the overflow-chambers to said pen-point to render the operation of the device in writing regular and uniform.

In Fig. 13 I have shown still another modified form of the device, wherein the under side of the feeder 7 is rounded or convex and the auxiliary tongue or projection 13^b is made with a flattened upper face, between which and said rounded under side of the feeder the slots or channels 10^c 10^c are present at opposite sides of the feed-groove 8, said grooves or channels 10^c being centrally connected by a space 14^a in a way similar to that shown in Figs. 7 to 12; but this central space is reduced in thickness, so as to more effectually hold the ink and prevent blotting.

In each of the several forms of the improved pen herein shown it will be observed that the overflow grooves or cuts are entirely independent of the feed-groove, being separated therefrom by surfaces on the feeding-tongue along opposite sides of the feed-groove and adapted for contact upon the under surface of a pen-point when the latter is in position in such a way as to effectually prevent the flow of ink transversely of the tongue from the feed-groove into the overflow-chambers until the ink shall have reached the extremity of the pen-point, at which position

the surplus supply of ink is free to flow into the overflow-chambers and will be held therein and prevented from dropping in blots from the pen.

5 From the above description it will be seen that the improved pen constructed according to my invention is of an extremely simple and inexpensive nature and is especially well adapted for use, since the feeding devices
10 herein shown and described effectually prevent the dropping of ink from the pen-point, so that blotting is prevented, and the action of the pen is made uniform and regular, any surplus ink supplied through the feed-groove
15 being held within the overflow-chambers until it is required for use, when it is permitted to run evenly and readily down the pen-point to the nibs for use in writing. It will also be obvious from the above description of my im-
20 provements that the pen constructed according to my invention is capable of considerable modification without material departure from the principles and spirit of the inven-
25 tion, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the improved feeding devices herein shown in carrying out my invention in practice.

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

1. A feeding device for fountain-pens and the like comprising a body portion provided with a feeding-tongue at its forward end and
35 having a feed-groove extended longitudinally along it with its forward end adjacent to the extremity of the feeding-tongue, the lateral portions of the feeding-tongue at opposite sides of the feed-groove being cut out to pro-
40 duce overflow-chambers which extend longitudinally along opposite sides of the feeding-tongue and having, between said overflow-chambers and the feed-groove, surfaces extended along opposite sides of said feed-groove
45 and adapted for contact with a pen-point in connection with which the device is used to prevent the flow of ink transversely of the tongue from the feed-groove into the over-
50 flow-chambers, each overflow-chamber being extended through from top to bottom of the feeding-tongue and being open along its entire length at the bottom of said feeding-tongue.

2. A feeding device for fountain-pens and the like comprising a body portion the forward end of which has a feeding-tongue the upper surface of which is convex, said body and tongue being provided with a longitudinal central feed-groove and the upper surface of the feeding-tongue being provided at
60 opposite sides of the feed-groove with longitudinal grooves extended through the feeding-tongue from top to bottom and open at the bottom of said feeding-tongue along their

entire length and forming overflow-chambers 65 to receive and hold surplus ink and having, along opposite sides of the feed-groove and between said feed-groove and the overflow-chamber, portions adapted for contact with a pen-point in connection with which the de-
70 vice is used to prevent the flow of ink transversely of the tongue from the feed-groove into the overflow-chambers.

3. A feeding device for fountain-pens and the like comprising a body portion provided with a feeding-tongue at its forward end and having a feed-groove extended longitudinally along it with its forward end adjacent to the extremity of the feeding-tongue for the supply of ink to a pen-point in connection with
80 which the device is used, said feeding-tongue being also provided with an overflow-chamber extended from its forward extremity rearward and having its rear portion separated from said feed-groove for the prevention of
85 the flow of ink from the feed-groove into said overflow-chamber and also having its forward end adapted to receive the surplus ink supplied from the forward end of the feed-groove, the said overflow-chamber being extended
90 through from top to bottom of the feeding-tongue and having its lower part open along its entire length at the bottom of the feeding-tongue.

4. A feeding device for fountain-pens and the like comprising a body portion provided with a feeding-tongue and having a feed-groove extended along it to the forward part of said tongue, the feeding-tongue having a slot extended longitudinally along it and forming an overflow-chamber extended from the forward part of said tongue rearward with its forward end adapted to receive the surplus ink supplied from the forward end of the feed-groove, said feeding-tongue having
105 portions extended along opposite sides of said slot and adapted for contact with a pen-point to prevent the flow of ink from the feed-groove into said slotted overflow-chamber.

5. A feeding device for fountain-pens and the like comprising a body portion provided with a feeding-tongue having a feed-groove extended along it to its forward part and having on opposite sides of said feed-groove slots extended lengthwise of the tongue with forward ends adapted to receive surplus ink from the forward part of the feed-groove, said slots forming overflow-chambers and the tongue having, along opposite sides of each slot, portions adapted for contact with a pen-
120 point to prevent flow of ink from the feed-groove into the rear portions of the slots.

Signed at Cincinnati, Ohio, this 13th day of November, 1903.

OTTO E. WEIDLICH.

Witnesses:

JOHN ELIAS JONES,
L. M. JONES.