

No. 879,436.

PATENTED FEB. 18, 1908.

G. W. BENNUM.

FOUNTAIN PEN.

APPLICATION FILED JUNE 29, 1907.

Fig. 1.

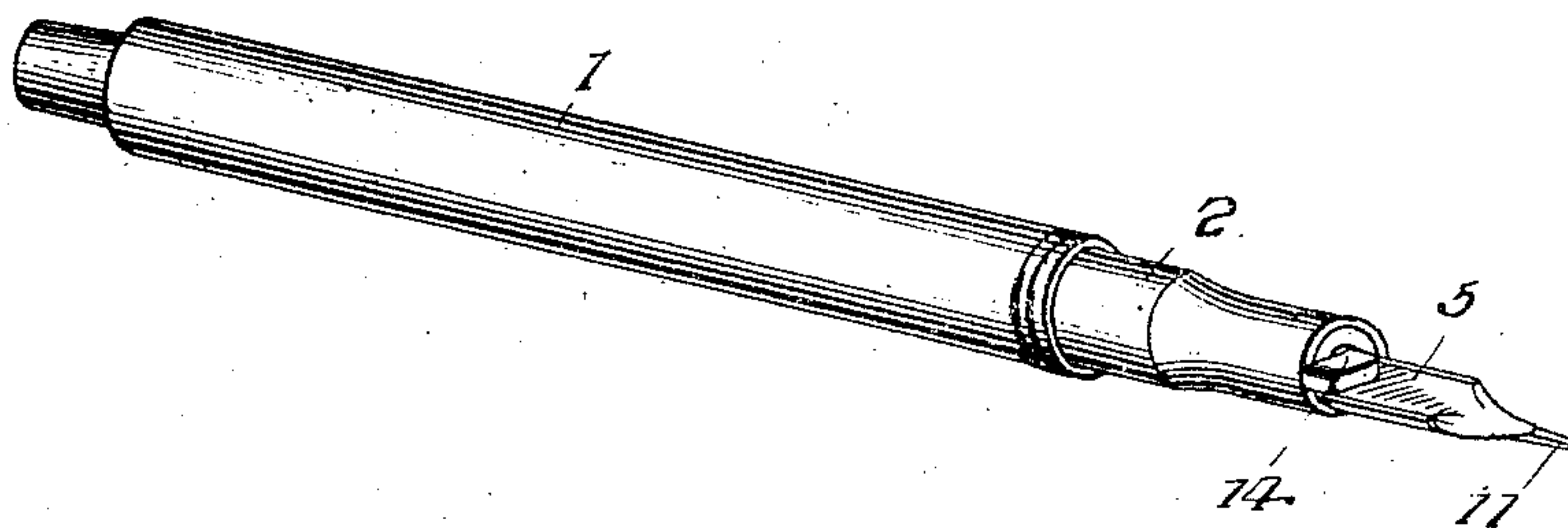


Fig. 2.

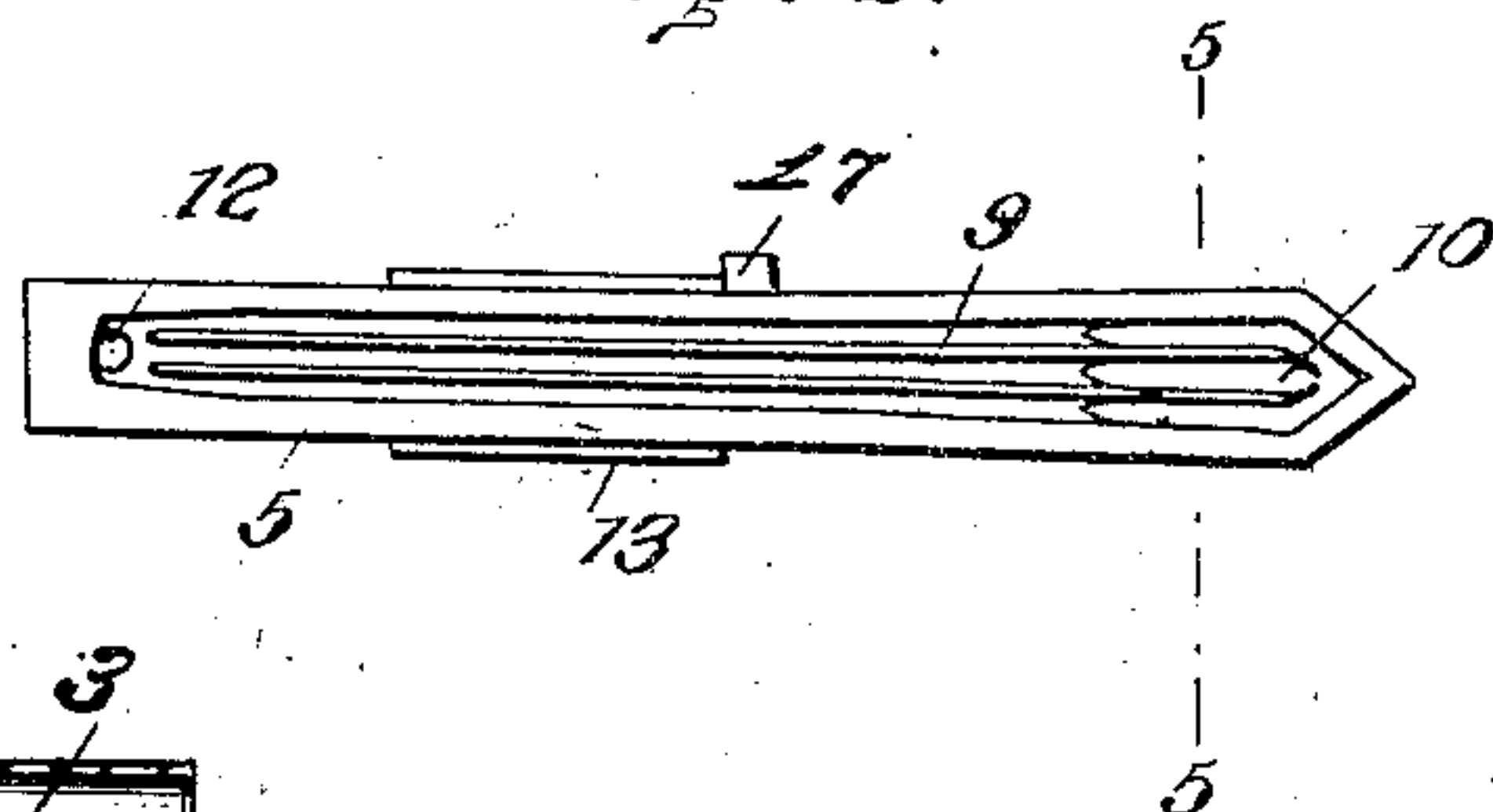


Fig. 7.

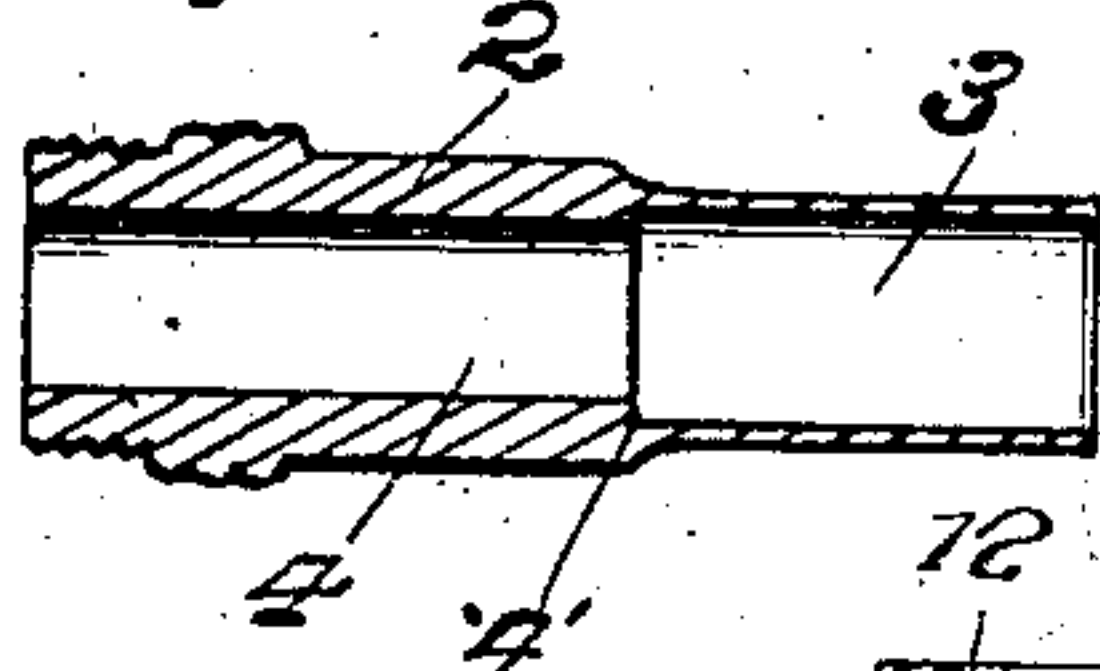


Fig. 3.

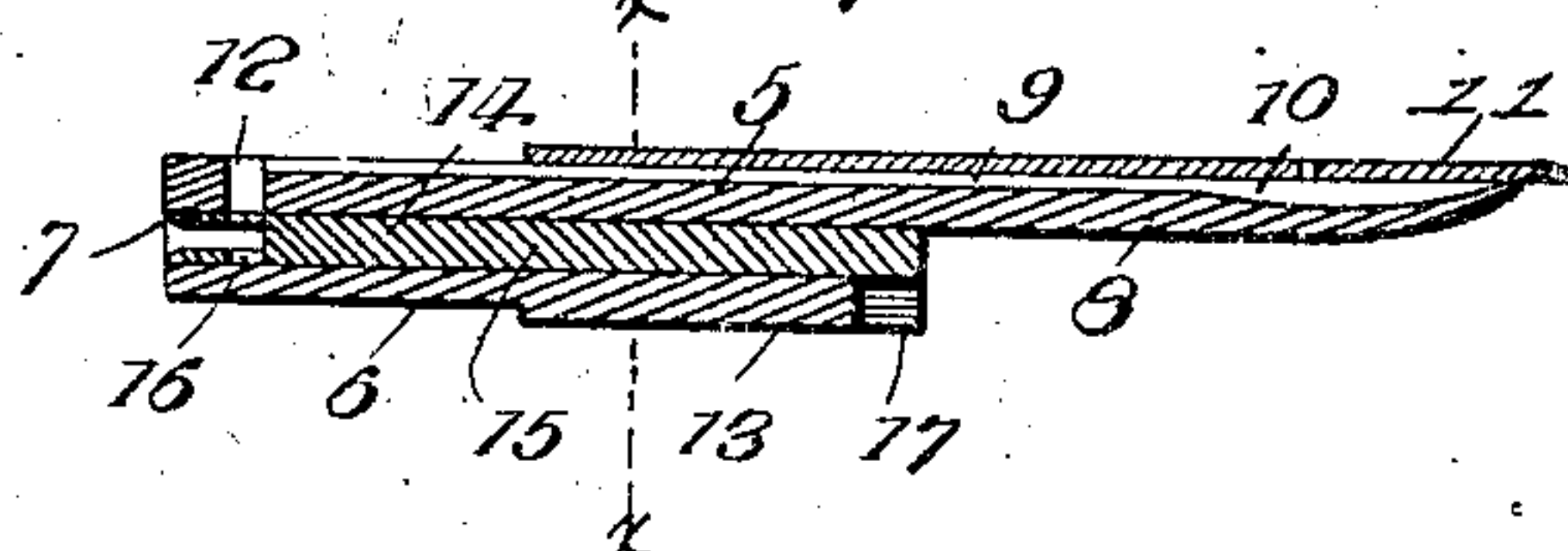


Fig. 6.

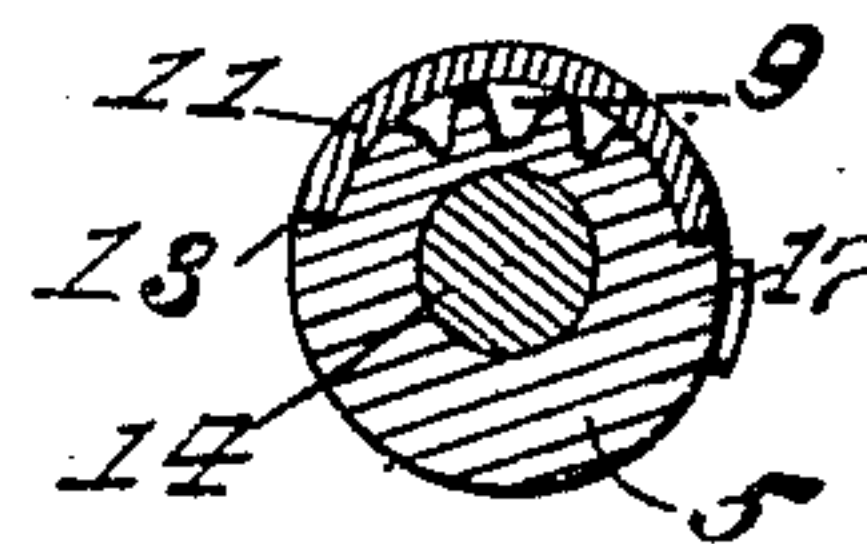


Fig. 4.



Fig. 5.



Witnesses

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FOUNTAIN-PEN.

No. 879,436.

Specification of Letters Patent.

Patented Feb. 10, 1903.

Application filed June 29, 1907. Serial No. 391,433.

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON BENNUM, a citizen of the United States, residing at Georgetown, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

The invention relates in general to fountain pens and particularly to a means for positively controlling the flow of ink to the feeding device and to a specific construction of the latter.

The main object of the invention is the production of a pen of the class described which embraces means, irrespective of the position of the pen, for preventing accidental flow of ink to the writing point and consequent leakage and soiling of the hands and clothing of the user.

Another object is the provision of a non-clogging feed device adapted to insure unimpeded initial flow of ink and to maintain a uniform delivery to the pen point and which is especially adapted to co-act with the flow-controlling means.

Another object is to provide an ink-tight connection between the body portion of the writing point and the nipple.

With these primary objects in view, the invention will now be described in the following specification taken in connection with the accompanying drawings and then more particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective of my invention. Fig. 2 is a top plan of the feed device. Fig. 3 is a vertical longitudinal section of the feed device, writing point, and flow-controlling means, illustrating the parts adjusted to prevent flow of ink. Fig. 4 is a perspective of the flow-controlling means. Fig. 5 is a transverse section on line 5—5 of Fig. 2. Fig. 6 is a transverse section on line $x-x$ of Fig. 3. Fig. 7 is a horizontal longitudinal central section of the nipple.

Referring now to the drawings, wherein like reference numerals refer to like parts throughout the several views, 1 denotes the handle reservoir of the pen, constructed of any desired or usual type.

2 indicates the nipple, removably attached to the handle by usual threaded connection and comprises a tube of desired length and external configuration, provided for a portion of its length at the forward end with a bore 3 and with a smaller bore 4 for

the remainder of its length, a circumferential shoulder 4' separating the two bores.

5 represents the feed device, comprising a cylindrical body-section 6 adapted to fit within the nipple and provided throughout its length with a bore 7 of suitable diameter, and a nib-section 8 conforming at its free end to the general plan contour of the pen point and provided with grooves 9 for conducting ink to the writing point and with a supplemental ink reservoir 10 and is designed, when the parts are assembled in operative position, to underlie the pen point 11, as usual.

Positioned near one end of the body-section 6 of the feed device, on the upper side thereof and opening into its bore, is an ink-inlet aperture 12, through which, when desired, the writing fluid is permitted to pass from the handle reservoir to the grooves 9. Said grooves, equally spaced and preferably three in number, extend longitudinally of the nib-section 8 from the inlet 12 to near the outer end of said section and converge near said end in conformity with said end's contour, as shown, thus providing for the simultaneous delivery of the ink from all the grooves at a common point directly behind the writing-point, as desired. The depth of these grooves is somewhat increased near their outer end to form the supplemental reservoir 10, beyond which the depth of the grooves gradually decreases to their meeting point immediately adjacent the writing-point, said construction, while not in any way interfering with a normal and uniform delivery of ink when the pen is being used for ordinary work, enabling the user, by slightly increasing the pressure on the writing-point, to secure immediately and positively an increased supply of ink when desired, as in shading, heavy-line work, etc. A semi-circumferential offset 13, equal in length to the bore 3 of the nipple, is formed on the under side of that end of the body section of the feed device opposite to the inlet 12 and in thickness is equal to that portion of the body of the pen point normally lying on the upper side of the feed device opposite said offset portion, the under surface of said pen point body conforming in curvature to that of the contiguous part of the feed device and the upper surface to that of the bore 3 of the nipple which, when the parts are assembled in normal position snugly embraces the offset portion and said pen point

body and forms a perfectly ink-tight connection, thus preventing flow of ink along portions where not desired, it being understood that the terminate longitudinal edges of said body portion of the pen point and offset 13 contact throughout their length. That portion of the feed device beyond offset 13 is of such dimensions as to snugly fit within bore 4 of the nipple and be embraced by the walls thereof, the rear ends of the pen point body and offset abutting the shoulder 4' which thus properly limits the longitudinal movement of the feed device when it is being assembled with the nipple.

14 denotes the cut-off for controlling the flow of ink to the feed device and comprises a cylindrical shaft 15, preferably, though not necessarily, of equal length with the body section of the feed device and adapted for partial rotation within the bore thereof, said shaft being bored for a portion of its length at one end and provided at approximately the forward end of said bore with an aperture 16 opening into said bored portion, and at the other end with an adjusting-lug 17, abutting, when the several parts are in operative position, the forward edge of offset 13. The apertures 12 and 16 are the same distance from the assembled adjacent ends of the feed device and cut-off respectively and can, as obvious, through rotation of shaft 15 by manipulation of adjusting-lug 17, be made to aline and permit flow of ink to the feed grooves, aperture 16 being in such circumferential relation to said lug as to insure registry of the two apertures when the lug is turned to extend in one direction approximately transverse the lower face of the nib section of the feed device and to position diametrically opposite to aperture 12 when the lug is turned to extend in the opposite direction and same relative position to said feed device, against which, when in either position, the lug will abut at the limit of its movement and rest closely contiguous and out of the way.

From the foregoing it will be seen that I have provided a fountain pen embracing means for preventing the leakage common to pens of this class, said means being positive and efficient in action, readily and easily manipulated by the user and, when adjusted to either permit or prevent flow of the writing fluid, so positioned as to be entirely removed from interference with the user's fingers, the pen also embracing a feed device especially adapted for use with the flow-controlling means and insuring a constant and uniform supply of ink to the writing point or a supply at an increased rate of flow, as

desired and which provides an unimpeded initial flow without other manipulation than adjustment of the cut-off lug. It will also be obvious that the feed device formed with the offset on its forward end of such thickness as to completely fill, in conjunction with the body portion of the writing point, made of equal thickness, the bore 3 of the nipple, insures a perfectly tight connection between the feed device, writing point, and nipple.

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

1. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom, a centrally-bored shaft within the feed device provided with means for controlling the supply of ink thereto, and a lug formed integral with said shaft and positioned contiguous said feed device and adapted for partial rotation, said lug abutting, at the limits of its rotation, the feed device for adjusting the supply-controlling means.

2. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom and formed with an inlet aperture, a centrally-bored shaft within the feed device provided with means for controlling the supply of ink thereto, and a lug formed integral with said shaft, located contiguous the feed device and adapted for limited rotation and, at the opposite limits thereof, to abut said feed device and aline and disaline said apertures.

3. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom and provided with a plurality of feed grooves deepened near their outer ends to form a supplemental reservoir, a shaft rotatable within the feed device and provided with means for controlling the supply of ink thereto, and means located beneath said feed device for adjusting the supply-controlling means.

4. A fountain pen comprising an ink reservoir, a nipple formed with an offset to receive a pen point body, a feed device connected to the nipple and adapted to receive a supply of ink from the reservoir, a pen point, a centrally-bored shaft within the feed device adapted for oscillation and means located beneath the pen point body for controlling the flow of ink.

In testimony whereof I hereby affix my signature, in presence of two witnesses.

GEORGE WASHINGTON BENNUM.

Witnesses:

GARDNER W. CALHOON,
W. F. BLACKSTONE.