

No. 771,360.

PATENTED OCT. 4, 1904.

A. EBERSTEIN.
FOUNTAIN PEN.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.

Fig. 1.

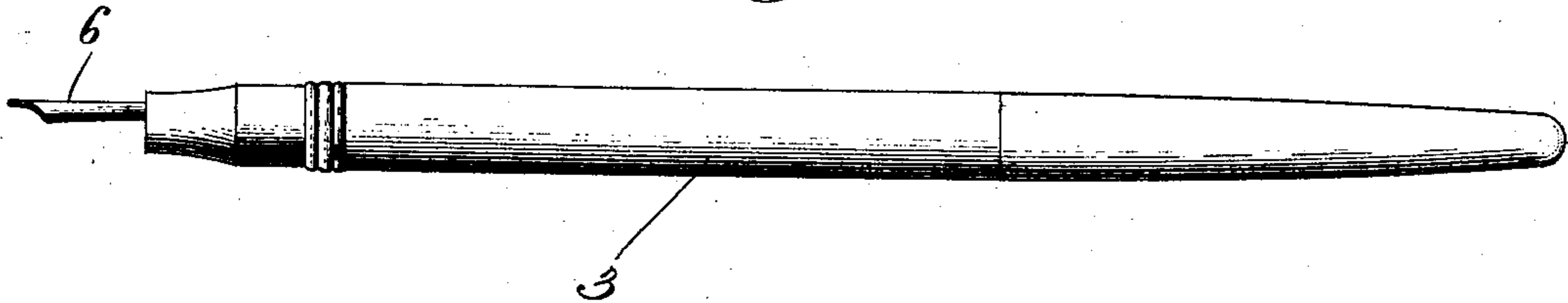


Fig. 2.

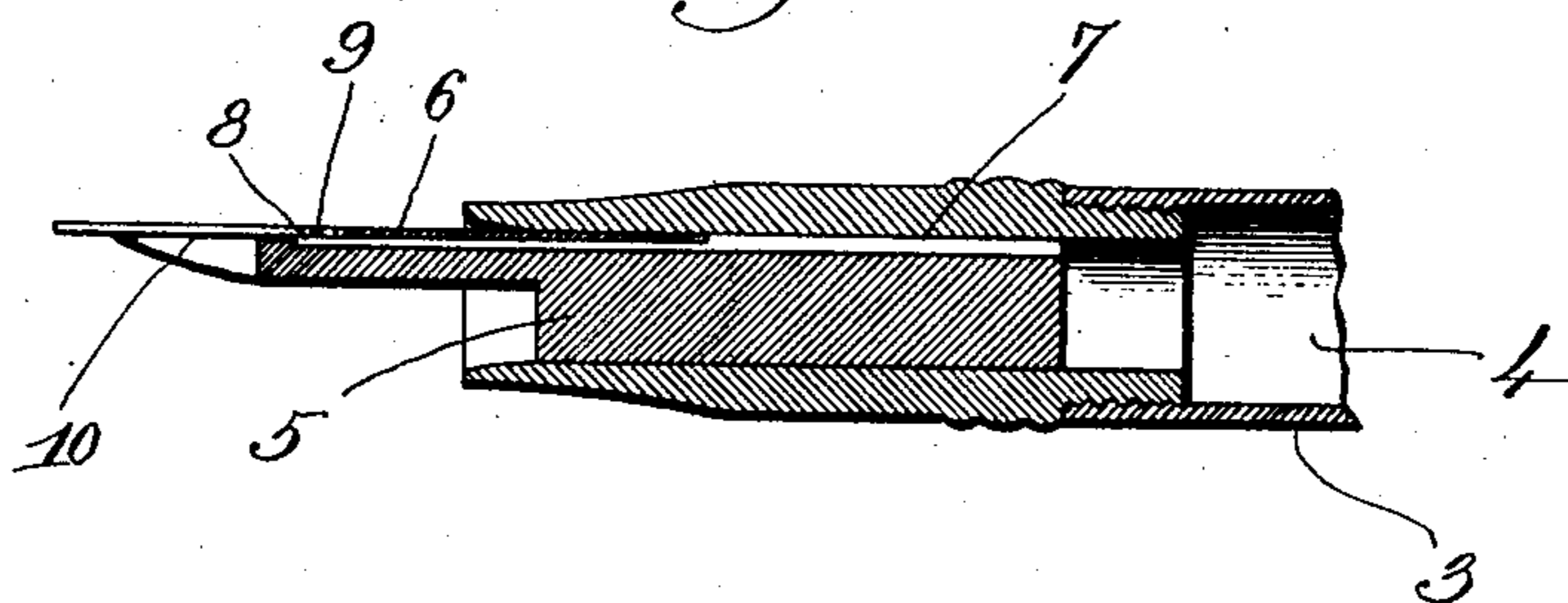


Fig. 3.

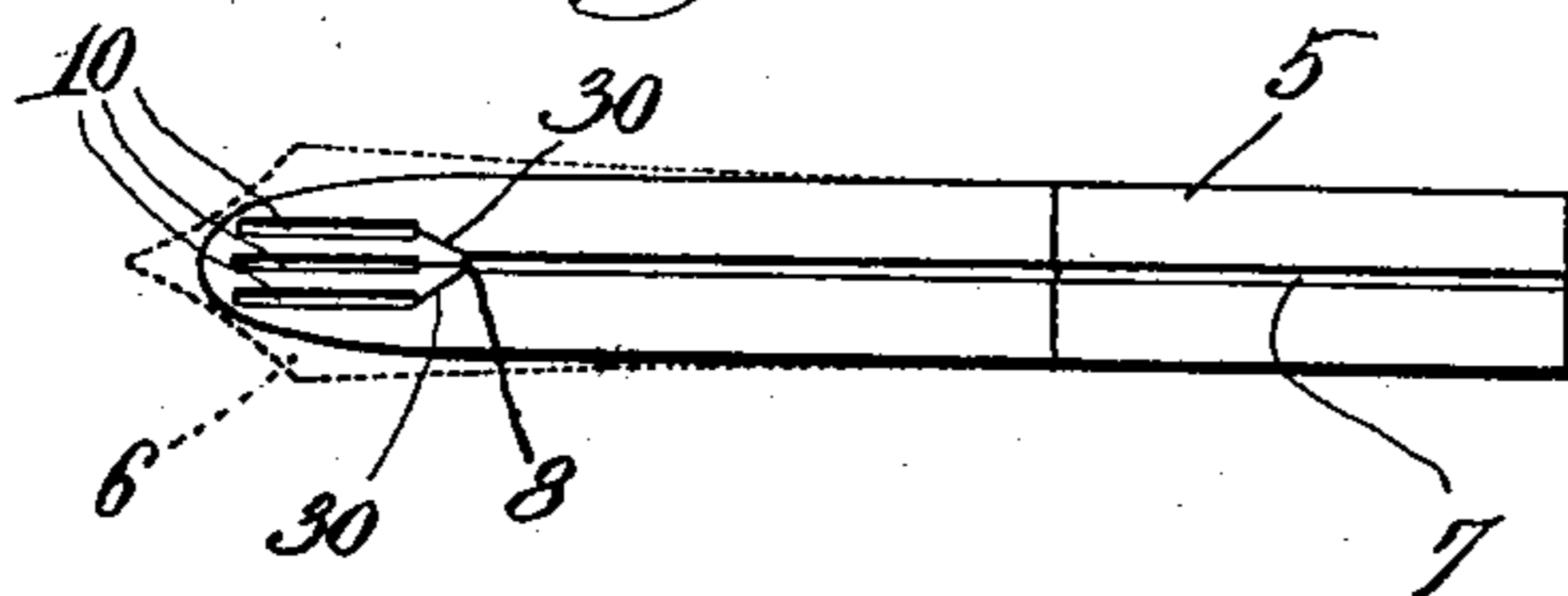
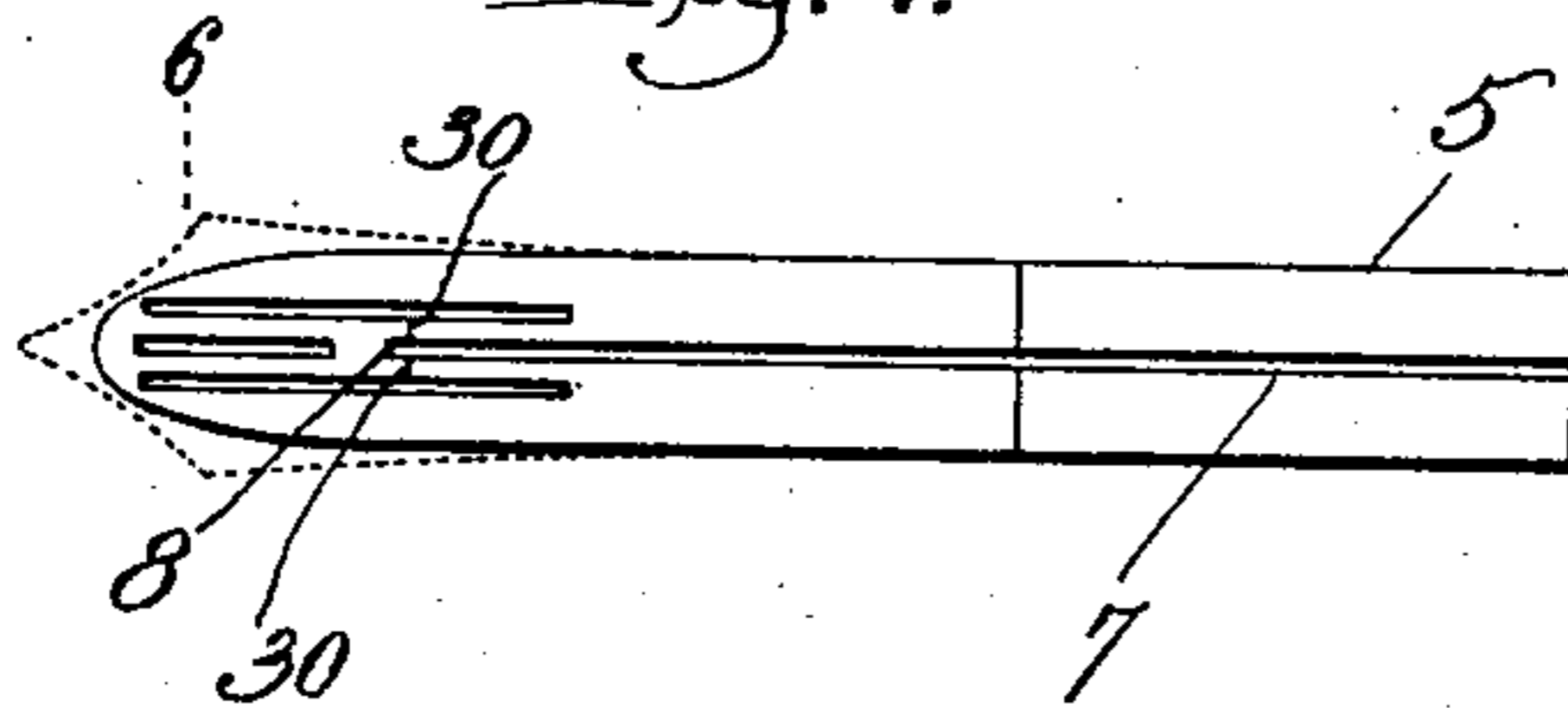


Fig. 4.



Witnesses:

Fred S. Grunkap.
S. Wm. Lutton.

Inventor,

August Eberstein,
by Crosby Gregory,
attys.

UNITED STATES PATENT OFFICE.

AUGUST EBERSTEIN, OF WINTHROP, MASSACHUSETTS, ASSIGNOR TO
CHARLES BRANDT, OF BOSTON, MASSACHUSETTS.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 771,360, dated October 4, 1904.

Application filed February 3, 1904. Serial No. 191,797. (No model.)

To all whom it may concern:

Be it known that I, AUGUST EBERSTEIN, a citizen of the United States, residing at Winthrop, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Fountain-Pens, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

This invention relates to fountain-pens, and especially to the feed device therefor, the object of the invention being to provide a novel feed device which will prevent the flooding or gushing of the pen and which will always retain sufficient ink at the pen-point, so that the ink begins to flow the instant the pen is brought in contact with the paper.

The improved feed device comprises a feed-bar which is inserted in the end of a barrel, as usual, and which has a feed-groove extending from its inner end toward its outer end, but terminating some distance back from the outer end and preferably substantially at the aperture in the pen-point at the end of the slit therein, and also has at its outer end one or more slots extending entirely therethrough and which form pockets into which any surplus ink which is conducted to the pen-point finds its way and by which said surplus ink is retained, thereby preventing it from dropping from the pen-point. These pockets also retain a sufficient supply of ink at the pen-point, so that the pen is always in condition for writing.

In the drawings, Figure 1 is a view of my improved pen. Fig. 2 is an enlarged vertical section. Fig. 3 is a plan view of the feed-bar. Fig. 4 shows a modification.

3 designates the barrel or shell of the pen, which may be of any suitable or usual construction and which contains the usual ink-reservoir 4.

5 designates the feed-bar, which is inserted into the end of the barrel, and 6 is the pen-point, which overlies the feed-bar and is confined between the latter and the inner bore of the barrel, as usual. The feed-bar is provided with a feed-groove 7, extending from the inner end thereof toward the outer, but termi-

nating at a point 8 some distance from the outer end of the feed-bar and preferably at a point substantially opposite the usual hole 9 in the pen-point at the end of the slit therein.

10 designates longitudinal slots which are cut entirely through the feed-bar. Any suitable arrangement of slots may be employed, and, as shown in Fig. 3, there are three such slots, one situated centrally of the feed-bar and in line with the feed-groove 7 and the other two situated either side of the central slot. In Fig. 4 a slightly-different arrangement is shown wherein the side slots 10 are longer than the central slot and extend back of the point 8 and along either side of the feed-groove. I prefer to connect each of the slots with the feed-groove by means of a capillary duct or channel. This capillary duct or channel may assume various forms, and, as herein shown, that between each of the side slots and the feed-groove is a very fine slit, (designated by the line 30.) The capillary duct between the feed-groove and the central slot is formed by removing the top of the wall between the end of the feed-groove and said central slot, so as provide a capillary duct between said wall and the pen through which the ink can find its way into the central slot. These capillary ducts connecting these slots with the feed-groove are not absolutely essential to my invention and may be omitted, if desired. I form them, however, because they enable any surplus ink to more readily find its way into the slots. It will be noted that these slots extend entirely through the feed-bar and are open to the air on the under side thereof, and also that they have direct communication with the feed-groove and are in the line of conduction of the ink from the ink-reservoir to the pen-nibs.

In using the pen the ink is conducted through the feed-groove 7 to the point 8 and from the latter flows to the point of the pen along the slits thereof, as usual, the pressure of the pen-point upon the paper lifting it from the feed-bar sufficiently to allow the ink to flow freely. Any surplus ink which finds its way to the pen-point fills into the slots 10, which form auxiliary pockets, and is thus prevented from

dropping off from the pen-point and causing a blot. The slots 10 are made sufficiently small, so that the ink is retained therein by capillary attraction, and therefore there is no tendency for the supply of ink in these pockets to run out and cause a blot. In addition to their function as auxiliary reservoirs to catch and retain surplus ink these pockets serve as a means of retaining sufficient ink at the pen-point to keep the pen moist, so that the pen is always in condition to write.

While I have herein illustrated one form of my invention, I do not wish to be limited to the details of construction illustrated, as these may be varied in many ways without departing from the spirit of the invention.

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

1. In a fountain-pen, a barrel and a feed-bar in one end thereof, said feed-bar having a feed-groove extending from its inner end toward its outer end but terminating some distance back from said outer end, and one or more longitudinal slots extending completely through the feed-bar and each having communication with the feed-groove.

2. In a fountain-pen, a barrel containing an ink-reservoir and a feed-bar in one end thereof, said feed-bar having a feed-groove extending from its inner end toward its outer end but terminating some distance back from its outer end, and one or more longitudinal slots extending completely through the feed-bar, one of said slots being in the line of conduction of the ink to the pen-point.

3. In a fountain-pen, a barrel having an ink-reservoir and provided with an opening in one end, a feed-bar inserted in said opening, and a pen-point overlying the feed-bar, said feed-bar having a feed-groove extending from its inner end toward its outer end and terminating substantially at the end of the slits in the pen-point, and one or more longitudinal slots extending completely through said feed-bar at its outer end.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST EBERSTEIN.

Witnesses:

LOUIS C. SMITH,
CHARLES BRANDT.