No. 731,987. PATENTED JUNE 23, 1903.

J. WEEKS.

FEEDER FOR FOUNTAIN PENS.

APPLICATION FILED SEPT. 6, 1902.

NO MODEL.

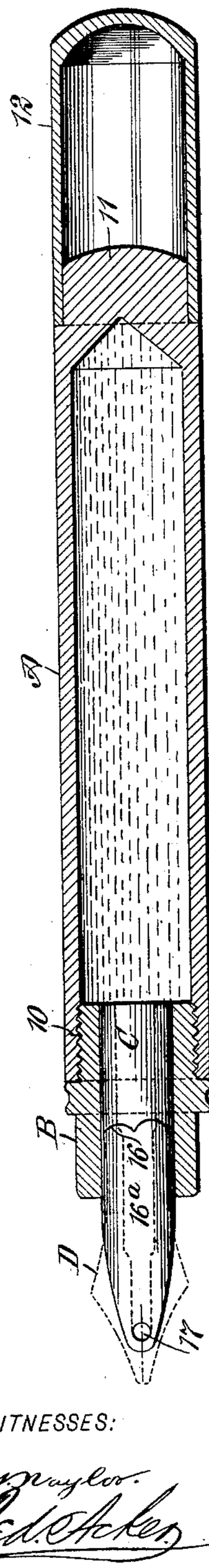

Fig. 1.

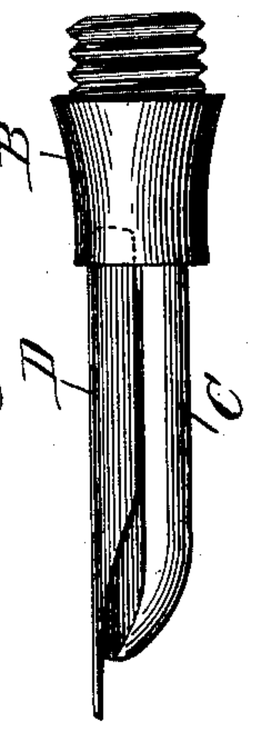

Fig. 4.

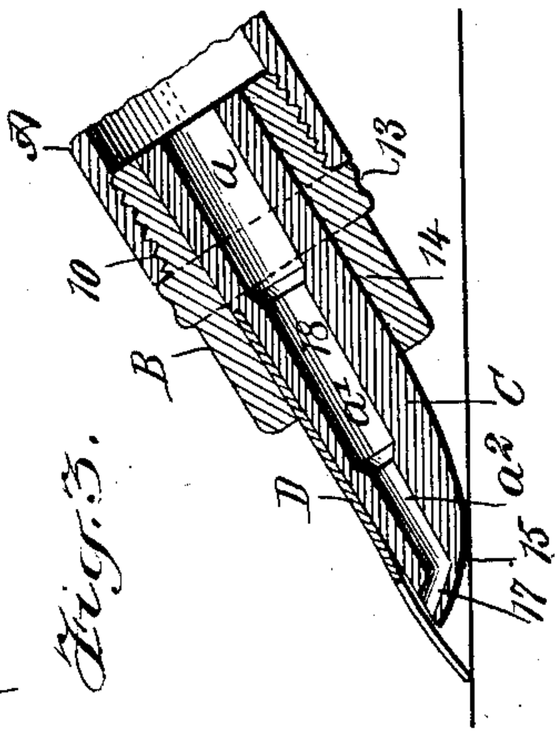

Fig. 3.

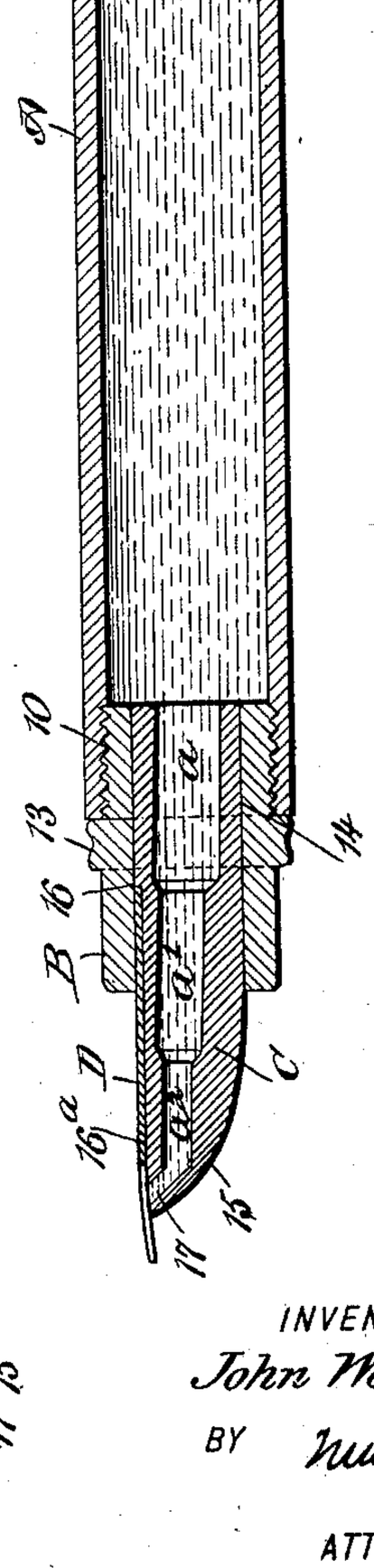

Fig. 2.

WITNESSES:

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No. 731,987. Patented June 23, 1903.

UNITED STATES PATENT OFFICE.

JOHN WEEKS, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN H. MORCH, OF BROOKLYN, NEW YORK.

FEEDER FOR FOUNTAIN-PENS.

SPECIFICATION forming part of Letters Patent No. 731,987, dated June 23, 1903.

Application filed September 6, 1902. Serial No. 122,334. (No model.)

To all whom it may concern:

Be it known that I, JOHN WEEKS, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Feeder for Fountain-Pens, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a simple, effective, and reliable feeder for fountain-pens adapted to any barrel and so constructed that it may be used in connection with any style of pen, the pen constituting a valve for the outlet of the feeder, normally concealing the said outlet, but automatically opening the outlet for the feeder to supply ink to the pen the moment the pen is brought into action and enabling the pen to be carried point down without danger of leakage, while the pen is kept constantly moist with ink, and consequently is always in condition for instant use.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal horizontal section through the barrel, showing the feeder in plan view and the pen in position in dotted lines. Fig. 2 is a longitudinal vertical section through the barrel, the feeder, and the pen, showing the pen closing the outlet of the feeder. Fig. 3 is a longitudinal vertical section through the outer end of the barrel, the feeder, and the pen, showing the pen in operative position and as uncovering the outlet of the feeder; and Fig. 4 is a side elevation of the pen, the feeder, and the nose, which is adapted to enter the barrel of the pen.

A represents the barrel of a fountain-pen, which barrel may of any approved type. As shown, the barrel is provided at its outer end with an interior thread 10 and at its inner end with a solid reduced section 11, on which the cap 12 for the nib is fitted when the pen is in use.

B represents a nose-plug, which is screwed into the outer end of the barrel until the outer end of the barrel engages with an exterior annular flange 13. This nose-plug B is provided with a bore 14, extending through from end to end, and in the bore 14 of the nose-plug B the improved feeder C is fitted, the inner end of the feeder extending, preferably, flush with the inner end of the nose-plug.

The outer end 15 of the feeder is more or less curved from its bottom portion upward to its top portion, and said forward end 15 of the feeder is also preferably more or less transversely contracted. At the top of the feeder D a recess 16^a is formed, extending from a shoulder 16 within the nose-plug C to the outer extremity of the said feeder, as is shown in Figs. 2 and 3, and a pen D is made to rest upon the recessed surface 16^a, the inner end of the shank of the pen engaging with the aforesaid shoulder 16, which latter may be of any desired formation. The nib portion of the pen D extends beyond the outer end of the feeder C the required distance.

At the forward or outer end of the feeder C an outlet-aperture 17 is made in its upper portion, following the curvature of the said outer end of the feeder downward until the said outlet 17 meets a longitudinal bore or chamber 18, produced in the feeder, and extending from the outlet to and through the inner end of the feeder. This chamber 18 is of varying diameter, being usually in three sections a, a', and a^2, the inner section a being of the greatest diameter and the outer section a^2, which connects with the outlet 17, being of the least diameter. The object of thus stepping or varying the diameter of the bore of the feeder is to permit initially a large flow of ink from the barrel into the feeder, which flow of ink is gradually diminished until when it reaches the outlet 17 it is just sufficient in quantity to feed the pen without overflowing the same.

When the pen D is in position, its shank is held between the feeder and the nose-plug B, and while the pen is inactive, whether held point up or down, the pen will automatically close the outlet 17 of the feeder to such an extent that while the pen-point may be kept moist ink cannot leave the outlet in sufficient quantities to cause a drip; but in operation

the moment that the pen is placed upon the paper and is brought into action for writing, as shown in Fig. 3, the pen uncovers the outlet 17 in the feeder and permits a flow of ink to be properly supplied to the pen. In writing the movement of the pen to and from the outlet of the feeder causes sufficient suction to facilitate the flow of ink and prevent any stoppage, and it will be understood that the extent to which the ink will flow from the feeder is governed by the extent to which pressure is brought to bear upon the pen-point.

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

In a fountain-pen, the combination with a barrel, and a nose-plug movably secured in said barrel, of a feeder extending through said nose-plug to communicate with the interior of the barrel and outward beyond said nose-plug, said feeder being provided with a recess in its upper surface extending from a point within the nose-plug to the outer end of the feeder, an ink-supply chamber formed of a series of graduated communicating passage-ways, the largest of said passage-ways being at the inner end of said chamber, said feeder also having an outlet communicating with the smallest of said passage-ways and arranged angularly thereto, the said outlet being of smaller diameter than the diameter of the smaller passage-way, the construction being such that the ink will be regularly and freely fed, and a pen fitted to the recessed portion of the feeder, the nib portion of the pen extending beyond the feeder and over the outlet thereof, whereby the said pen acts as a valve, substantially as set forth.

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

JOHN WEEKS.

Witnesses:
JOSEPH HASLACH,
W. W. MCMAUNUS.