(No Model.)

J. WEEKS.

FOUNTAIN PEN.

No. 605,035. Patented May 31, 1898.

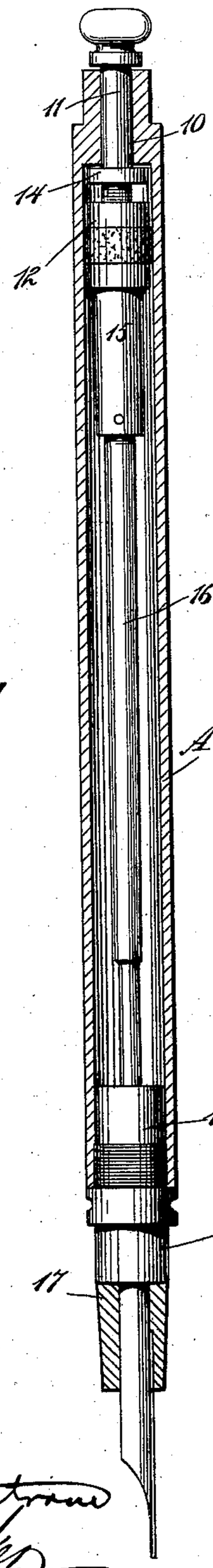

Fig. 1

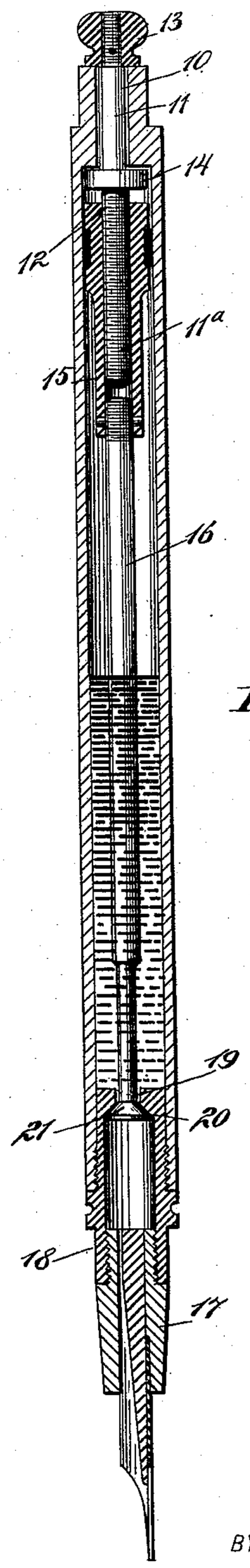

Fig. 2

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN WEEKS, OF BROOKLYN, NEW YORK, ASSIGNOR OF THREE-FOURTHS TO JOHN H. MORCH, OF SAME PLACE.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 605,035, dated May 31, 1898.

Application filed June 30, 1897. Serial No. 642,991. (No model.)

To all whom it may concern:

Be it known that I, JOHN WEEKS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Fountain-Pen, of which the following is a full, clear, and exact description.

The object of my invention is to construct a fountain-pen in such manner that but few parts need be employed, all of them being readily assembled or disconnected, thereby providing for a thorough cleansing of the pen.

Another object of the invention is to so construct the pen that by the manipulation of an exterior portion the flow of ink will be under perfect control at all times in opening and closing.

A further object of the invention is to provide a pen wherein the supply of ink to the nib may be cut off to such an extent that the pen may be carried point up or point down without danger of leakage, and whereby, further, the ink cannot corrode, since when it is held in the barrel it will be air-bound.

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 claims.

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 both the figures.

Figure 1 is a longitudinal section through the barrel of a pen, the other parts being shown in elevation; and Fig. 2 is a longitudinal section through the entire pen.

The barrel A may be of any size and is closed at the top with the exception of an opening 10, through which a stem 11 is passed, the said stem carrying at its lower end a plunger 12. At the upper or outer end of the stem 11 a knob 13 or its equivalent is secured, by means of which the stem may be turned, and the stem is prevented from having end movement in the barrel, although it may be freely turned therein by attaching a collar 14 to the stem immediately below the under face of the upper closed portion of the barrel, the lower portion of said barrel being open. The plunger is provided with a suitable packing which engages with the inside wall of the barrel, and the plunger is held to travel up and down the lower portion of the stem 11, which is provided with an exterior thread 11^a, as shown in Fig. 2. At the lower portion of the plunger a tubular extension 15 is formed, of less diameter than the plunger, and the upper end of the valve-rod 16 is secured in the tubular extension in any suitable or approved manner.

A pen-sleeve 17, in which the nib or pen is placed, together with the feeder, is attached in any suitable or approved manner to the nose 18, which nose is screwed into the lower or open end of the barrel. The upper or inner end of the nose is closed except that an opening 19 is formed for the passage of the valve-rod 16 to the chamber within the nose, and immediately below the top or inner end of the nose in which the opening 19 is made a valve-seat 20 is formed, adapted to accommodate a valve 21, secured to the aforesaid valve-rod.

In operation by raising the piston in the body barrel or reservoir of the pen through the medium of the screw attached to the knob at the top of the reservoir a vacuum is produced in the body, barrel, or reservoir which will cause the ink in the feeder and pen to return to the reservoir or barrel, where it will be held by the seating of the valve. When the pen is to be used after the ink has been locked in the reservoir or barrel, the piston is depressed or made to travel downward in the barrel, which will unseat the valve and permit the ink to flow to the pen in required quantities. The valve when seated effectually prevents the ink from flowing to the point of the pen, and therefore the pen may be carried in any position—namely, point up or point down—with safety.

The filling of the pen with ink is accomplished by removing the sleeve 17 from the nose 18, unscrewing the nose, and feeding the valve-rod downward until the nose can be separated from the barrel. The ink may then be introduced into the barrel.

It is evident that a pen constructed as above set forth is exceedingly simple, comprising but few parts, and that the supply of ink to the nib will be completely under the control of the operator.

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

1. In a fountain-pen, a barrel having a valve-seat, a plunger held to travel in the barrel, a valve controlled by the plunger, adapted for engagement with the said seat, and means for operating the plunger, substantially as described.

2. In a fountain-pen, a plunger, and a valve connected therewith, located within the barrel of the pen, the plunger being arranged to draw the ink from the nib or to force the ink in direction thereof, the valve controlling the supply of ink to the nib, as specified.

3. In a fountain-pen, the combination with a barrel, of a plunger movable longitudinally within the barrel of the pen, and a valve connected with the said plunger and located within the barrel of the pen, the said plunger when moved in one direction drawing the ink from the nib and when moved in the opposite direction forcing the ink toward the nib, the said valve controlling the supply of ink to the nib, substantially as specified.

4. In a fountain-pen, the combination with a barrel having its lower end provided with a chamber communicating by a contracted opening with the interior of the barrel, and a valve controlling the passage of material from the body of the barrel to the said chamber, the said valve having a rod extending upward into the barrel, of a plunger connected with the upper end of said valve-rod, and means for imparting movement to said plunger longitudinally of the barrel, substantially as set forth.

5. In a fountain-pen, the combination with a barrel having its lower end provided with a chamber communicating with the interior of the barrel, and a valve controlling the passage of material from the body of the barrel to the said chamber, of a stem arranged to turn in the upper portion of the barrel and held against end movement, the said stem being capable of being operated from the outside of the barrel and having its inner or lower end threaded, and a plunger arranged to travel on the threaded portion of said stem when the stem is turned, said plunger being connected with the said valve, substantially as described.

6. In a fountain-pen, the combination with a barrel, and a stem extending through an opening in the top of the barrel and fitted to turn therein, the outer end of the stem being provided with a knob by which the stem may be turned, the said stem being provided inside the barrel with a collar to prevent end movement and the lower portion of the stem within the barrel being provided with an exterior thread, of a plunger held to travel upon the lower threaded portion of the stem, the said plunger having a tubular extension at its lower portion of less diameter than the plunger, a nose arranged to carry a pen-sleeve at its lower end and screwing into the lower end of the barrel, the said nose being formed with a chamber and having a contracted opening in its top connecting said chamber with the interior of the barrel, and a valve arranged to control the passage of material from the body of the barrel to the said chamber, the said valve being provided with a rod extending upward in the barrel and connected at its upper end to the tubular extension of the plunger, substantially as shown and described.

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Witnesses:
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