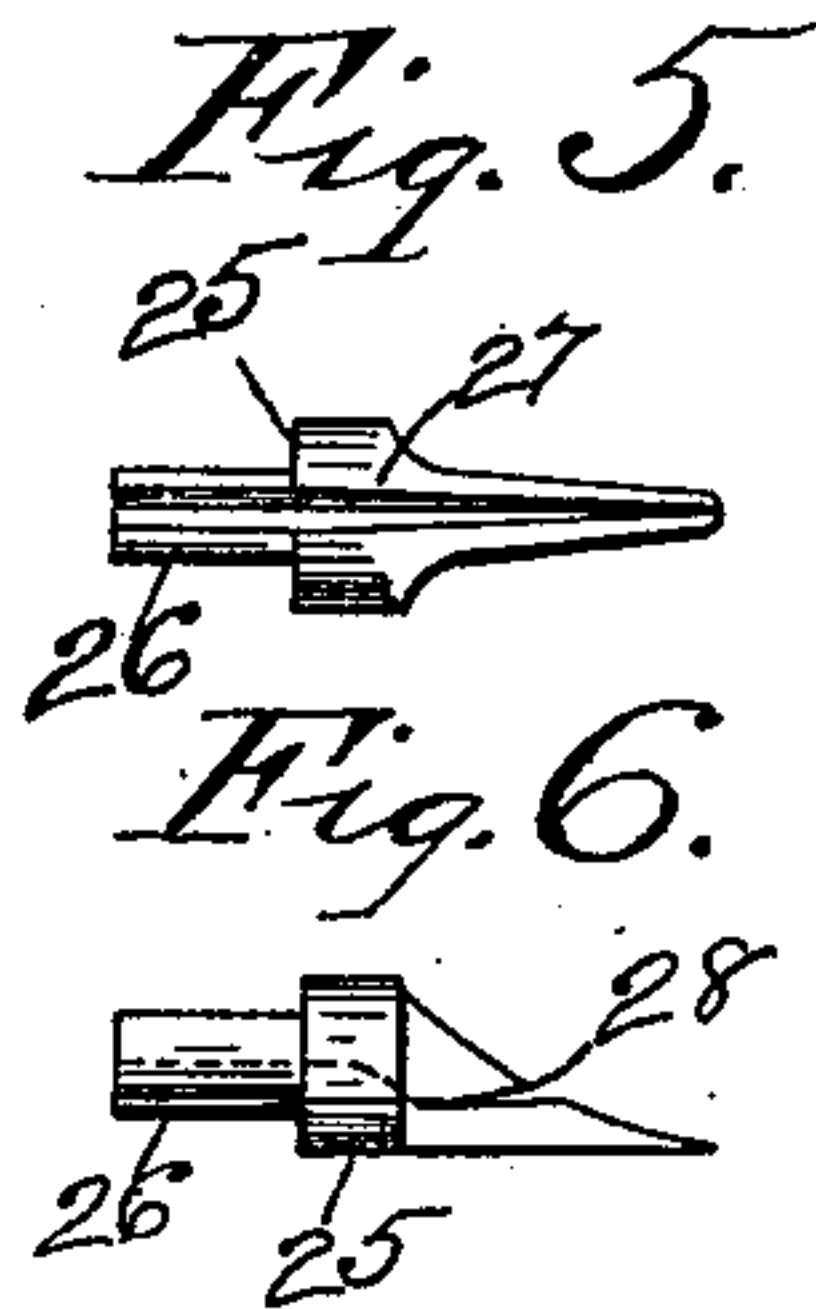
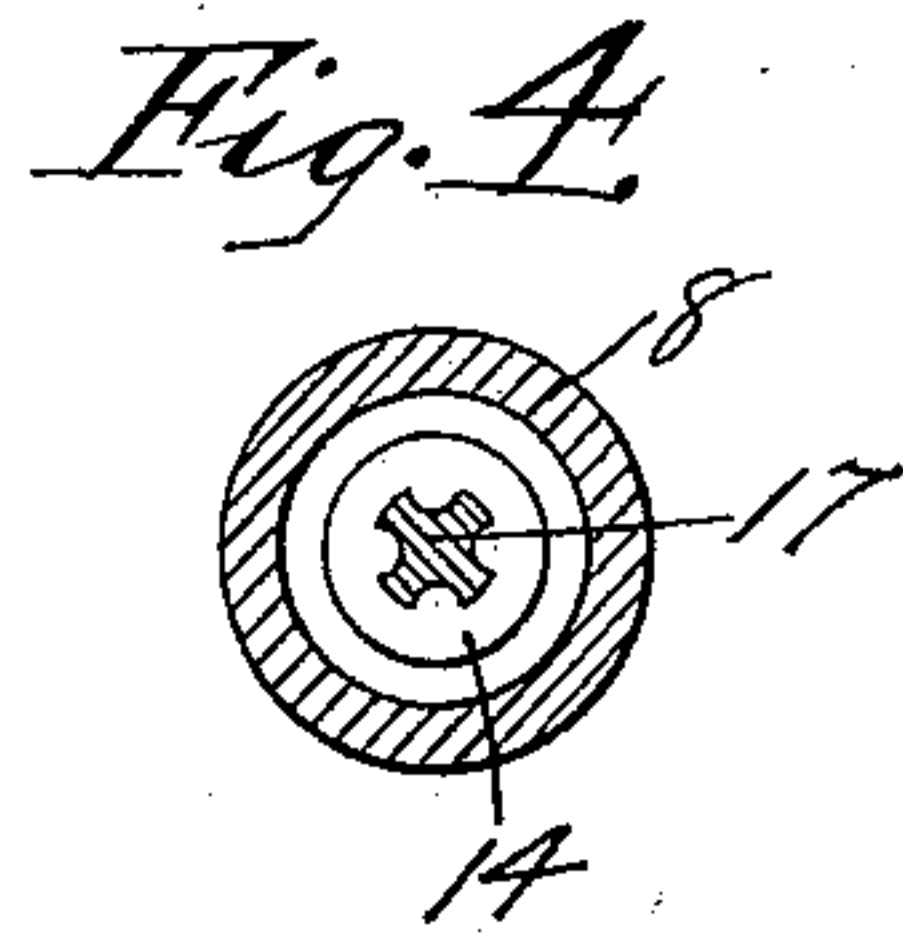
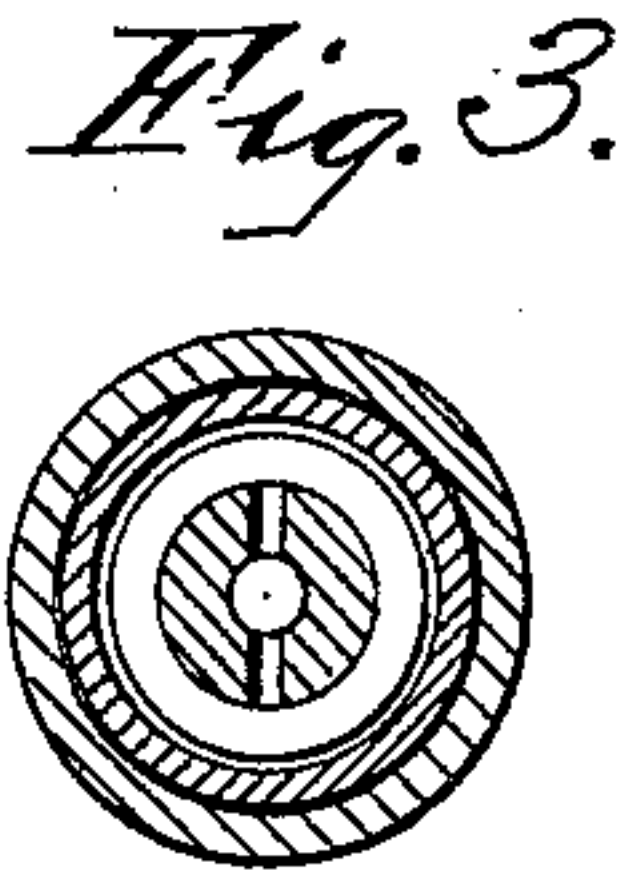
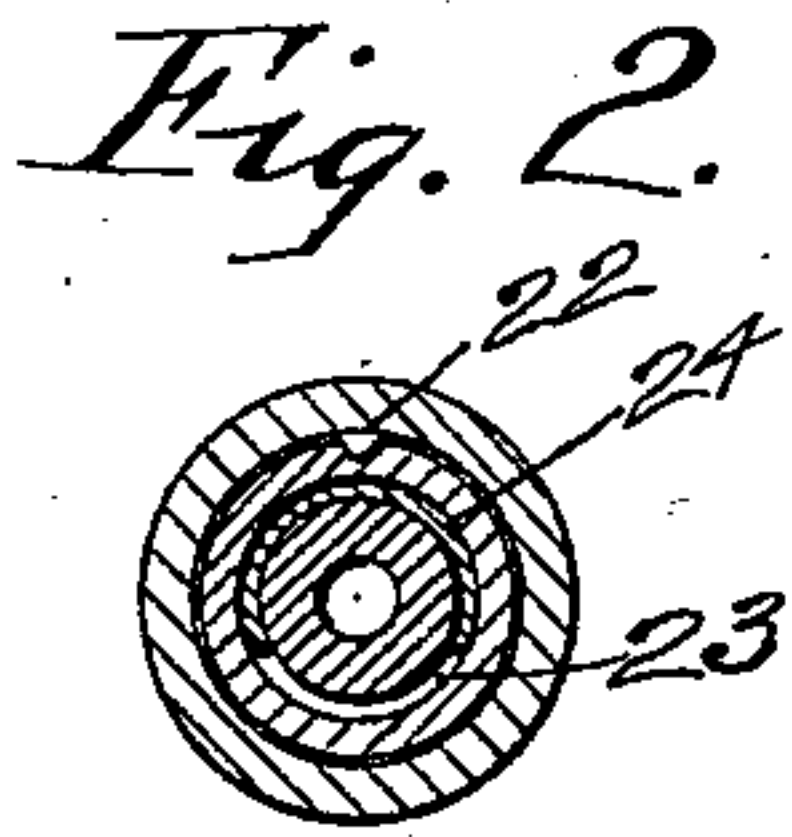
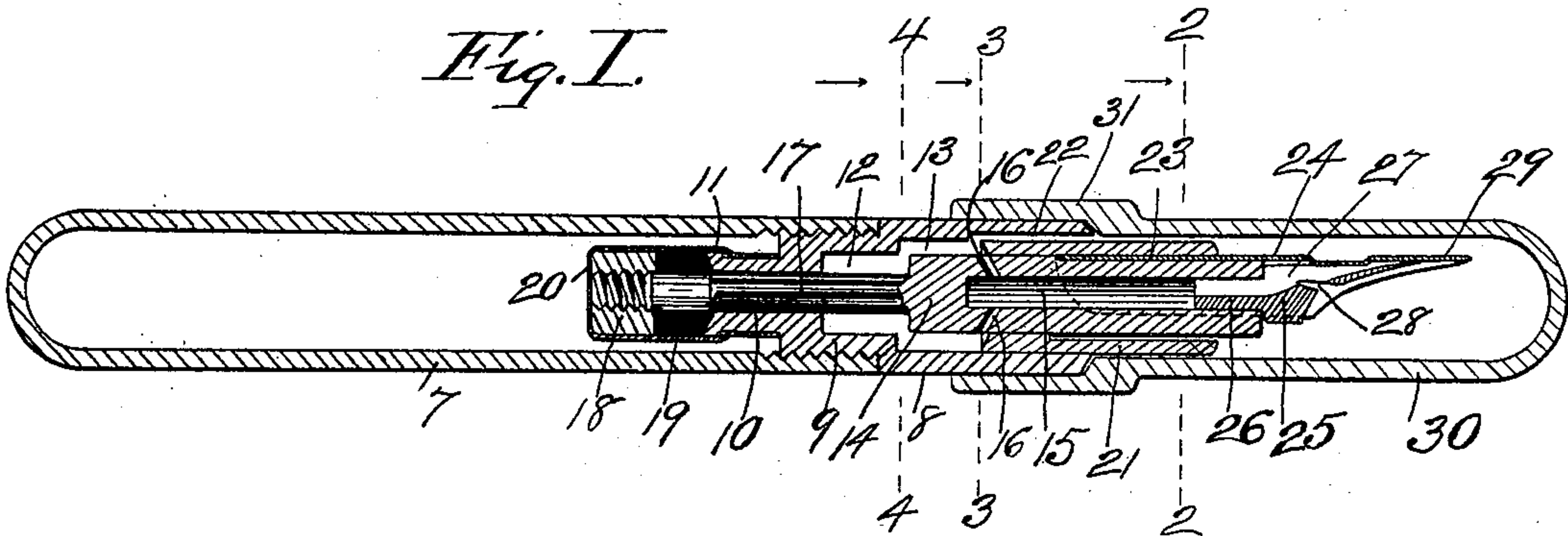


(No Model.)

F. J. PRIBYL.
FOUNTAIN PEN.

No. 594,098.

Patented Nov. 23, 1897.



WITNESSES

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 594,098, dated November 23, 1897.

Application filed July 14, 1896. Serial No. 599,066. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS J. PRIBYL, a citizen of the United States, and a resident of Hazleton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts wherever found throughout the several views.

This invention relates to fountain-pens such as are usually employed for writing, drawing, and other purposes; and the object thereof is to provide an improved device of this class which is simple in construction and operation and which works upon the principle of a force-pump, the ink being pumped out of the reservoir into or upon a pen, and the construction being such that any surplus ink out of the reservoir at the time the writing is finished may be forced or pumped back thereinto.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a central longitudinal section of my improved pen; Fig. 2, a section on the line 2 2 of Fig. 1; Fig. 3, a section on the line 3 3; Fig. 4, a section on the line 4 4; Fig. 5, a back view of an ink-feeding plug which I employ, and Fig. 6 a side view thereof.

In the practice of my invention I provide a tubular reservoir or holder 7 of the usual form, and which is closed at one end and screw-threaded at the other, and connected therewith is a tube 8, having a screw-threaded extension 9, which is adapted to be connected with the reservoir or holder 7, as shown in Fig. 1, and which is provided at its inner end with a tubular extension 10, on which is formed an annular flange or rim 11.

That portion of the tube 8 which is connected with the holder or reservoir 7 is smaller than the outer end thereof, and by means of this construction two annular chambers 12 and 13 are formed, the outer chamber 13 being larger than the inner chamber 12, and I also provide a sliding cylinder 14, which is mounted in the tube 8 and the outer end of which is provided with a longitudinal bore

15, which is open at its outer end, and formed in or adjacent to the inner end of the sliding cylinder 14 are side ports or openings 16, which communicate with the central longitudinal bore 15.

The cylinder 14 is provided at its inner end with a shaft 17, which is in the form in cross-section shown in Fig. 4, being provided with longitudinal grooves in the sides thereof, and said shaft 17 passes through the tubular extension 10, formed on the screw-threaded end of the tube 8, and is provided with a nut or bur 18, at the inner side of which is mounted a packing 19, of rubber or similar material, and passing over the inner end of the shaft 17 and the nut or bur 18 is a rubber or other elastic band 20, the ends of which are secured to the tubular extension 10 of the tube 8, and the packing 19 is secured to the shaft 17 adjacent to the nut or bur 18, and instead of the elastic band any suitable spring may be employed.

The outer end of the cylinder 14 is provided with a sleeve 21, which is secured thereto and which is free to slide in the outer end of the tube 8, and between said sleeve and the outer end of said tube is formed a longitudinal passage 22, through which the air passes in the operation of the device, as hereinafter described, and between the outer end of the sleeve 21 and the cylinder 14 is an annular space 23, into which the pen 24 is inserted, said space being adapted to serve as a pen-holder. The outer end of the cylinder 14 is also provided with an ink-feeding plug 25, which is provided at its end with a cylindrical extension 26, adapted to be inserted into said cylinder 14 or the central bore formed therein, and the outer end of the said plug 25 is formed like a pen, and said plug is provided on its upper side with a longitudinal groove 27, through which the ink passes, and at each side of the pen-shaped portion of the outer end thereof is a slot 28, and this feeding-plug may also serve under certain circumstances for a pen, especially when heavy or coarse writing is required.

The point of the pen 24 projects beyond the point of the feeding-plug, as shown at 29, and I also provide a removable tubular cap or cover 30, which is closed at its outer end and provided with an enlarged inner end, as shown

at 31, and this cap or cover is adapted to be connected when the pen is not in use with the outer end of the tube 8, as shown in said figure, and this connection is preferably made
5 by means of an ordinary slip-joint.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof:
10 The reservoir or holder 7 is filled with ink in the usual manner, after which the plug 8 is secured therein in the usual manner. When it is desired to write or draw with the pen, the point thereof is pressed on the paper, and
15 this operation forces the cylinder 14 inwardly, and the shaft 17 is also forced inwardly, carrying with it the nut or bur 18 and the packing 19, the elastic band 20 yielding to permit of this operation, and the air in tube 8 is
20 forced into reservoir through the tubular extension 10, and when the pressure on the point of the pen is removed the elastic band 20 returns the cylinder 14 to the position shown in Fig. 1, thus producing a vacuum in
25 the tube 8 by the withdrawal of piston 14, which the ink, assisted by the pressure of air within the reservoir, speedily enters through the tube 10 and flows through the ports or passages 16 in the cylinder 14 into the central
30 bore 15 and out through the ink-feeding plug 25 or through the slot 27, formed in the back thereof, to the point of the pen.

The operation of pressing the point of the pen upon the paper and allowing the ink to
35 flow into or be forced into the tube 8 may be repeated as often as desired, and if any ink remains in said tube 8 when the writing is finished the pen is held with the point up and the cylinder 14 is operated by means of the
40 projecting end thereof or the feed-plug 25, so as to force the ink in the tube 8 back into the reservoir or holder.

It will be understood that when the reservoir or holder is held so that the pen will
45 point upwardly all the ink in the tube 8 and in the cylinder 14 will flow back into the screw-threaded extension 9 of the tube 8, and by pressing the cylinder inwardly said ink will flow back through the tubular extension
50 10 of the tube 8 into the reservoir, and this operation may be repeated as often as desired. It will also be observed that the inner end of the cylinder 14 is substantially of the same size as the chamber 12 in the inner end of
55 the tube 8, and said cylinder 14 is adapted to force the ink back into the reservoir or holder, and in the normal position of the parts the elastic band 20 keeps the packing 19 seated on the end of the tubular extension 10 and
60 closes the passage therethrough and the ink cannot escape or flow out through the tube 8 and the cylinder 14.

This device is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and
65 it is evident that changes in and modifications of the construction herein described may

be made without departing from the spirit of my invention or sacrificing its advantages.

The packing 19 is not absolutely essential, 70 and the nut or bur 18 may serve as a suitable head to close the end of the tubular extension 10, and in the operation of the device, as hereinbefore described, air passes through the longitudinal space 22 between the outer 75 end of the tube and the sleeve 23, or simply around the outer circumference of the sleeve 23 and into the reservoir or holder and also into the tube 8, and this space 22 preferably consists of a longitudinal groove, as shown 80 in Fig. 2.

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

1. A fountain-pen comprising a tubular res- 85 ervoir, or holder, which is closed at one end, and open at the other, a tube mounted in the open end thereof, and provided with a tubular extension which projects into the reservoir, a sliding cylinder mounted in said end 90 tube, and provided with a shaft which projects through said tubular extension, and on which is mounted a packing which is adapted to close the inner end of said extension, said shaft being provided with longitudinal 95 grooves, and with an elastic band which serves to keep the packing seated, on the inner end of the tubular extension, and said cylinder being also provided at its outer end with a central bore, the inner end of which is pro- 100 vided with side ports or openings, which form a communication between the annular chambers 12 and 13, and the said bore, and said cylinder being also provided at its outer end with a suitable feeding-plug, and a penholder, 105 substantially as shown and described.

2. A fountain-pen comprising a tubular reservoir or holder, which is closed at one end, and open at the other, a tube mounted in the open end thereof and provided with a tubular 110 extension which projects into the reservoir, a sliding cylinder mounted in said end tube, and provided with a shaft which projects through said tubular extension, and on which is mounted a packing, which is adapted to close 115 the inner end of said extension, said shaft being provided with longitudinal grooves and with an elastic band which serves to keep the packing seated on the inner end of the tubular extension, and said cylinder being also pro- 120 vided at its outer end with a central bore, the inner end of which is provided with side ports or openings, which form a communication between the annular chambers 12 and 13, and said bore, and said cylinder being also pro- 125 vided at its outer end with a suitable feeding-plug, and a penholder, said penholder consisting of a tubular sleeve, mounted on said cylinder, which is adapted to move therewith, and to slide within the outer end of the tube 130 which is connected with the reservoir or holder, and between which and said tube, is an air-passage, substantially as shown and described.

3. The herein-described fountain-pen, consisting of a tubular reservoir or holder 7, a tube as 8, mounted in the outer end thereof, and provided with an inwardly-directed tubular extension at its inner end, a cylinder as 14, mounted in said tube and provided with a grooved shaft, which passes through said tubular extension, and on the inner end of which is mounted a suitable head, nut or bur, an elastic band which passes over said head, and which is connected with said tubular extension, and said cylinder being provided with a central bore, which opens outwardly, and side ports or passages which communicate therewith, and said central bore being provided at its outer end with a feeding-plug which is adapted to serve as a pen, substantially as shown and described.

4. The herein-described fountain-pen, consisting of a tubular reservoir or holder 7, a tube as 8, mounted in the outer end thereof, and provided with an inwardly-directed tubular extension at its inner end, a cylinder as 14, mounted in said tube, and provided with a grooved shaft, which passes through said

tubular extension, and on the inner end of which is mounted a suitable head, nut or bur, an elastic band which passes over said head, and which is connected with said tubular extension, and said cylinder being provided with a central bore, which opens outwardly, and side ports or passages which communicate therewith, and said central bore being provided at its outer end with a feeding-plug which is adapted to serve as a pen, said feeding-plug being provided with a longitudinal groove in the back thereof, through which the ink passes, and said cylinder being also provided with a sleeve which is adapted to serve in connection with said cylinder, as a pen-holder, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 9th day of July, 1896.

FRANCIS J. PRIBYL.

Witnesses:

JOHN NÉMETH,
JOSEPH REICHMAN.