No. 742,769. PATENTED OCT. 27, 1903.

T. WHEATLEY.

FOUNTAIN PEN.

APPLICATION FILED DEC. 22, 1902.

NO MODEL.

Fig. 1.

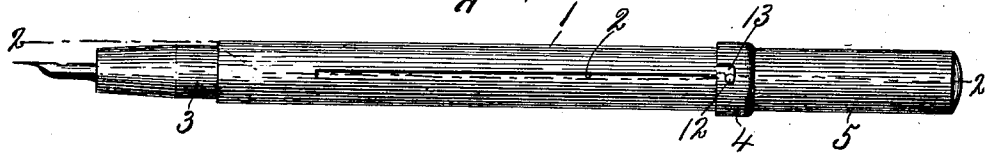


Fig. 2.

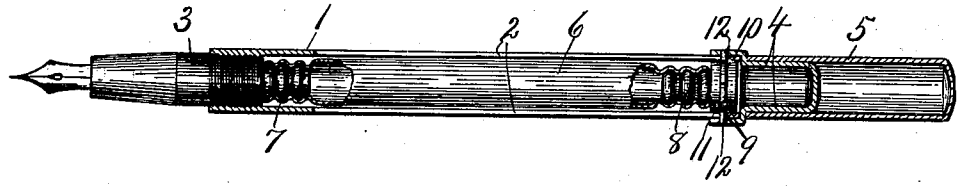


Fig. 3.

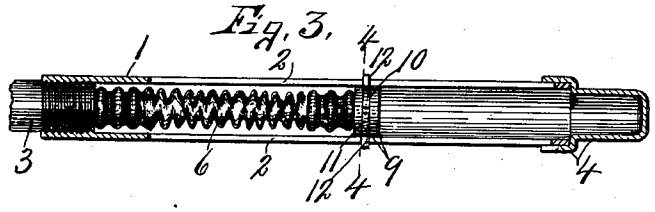


Fig. 5

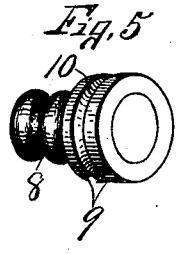


Fig. 4.

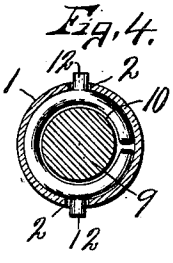


Fig. 6.

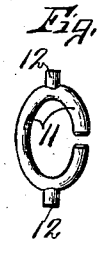
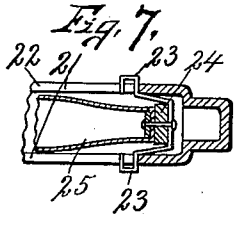


Fig. 8.



Fig. 7.



WITNESSES:

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No. 742,769. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

THOMAS WHEATLEY, OF SYRACUSE, NEW YORK.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 742,769, dated October 27, 1903.

Application filed December 22, 1902. Serial No. 136,198. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WHEATLEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Fountain-Pens, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in fountain-pens, and refers more particularly to the ink-reservoir.

One of the objects of this invention is to provide a compressible and extensible reservoir operable manually for drawing the ink into the reservoir and expelling the same therefrom.

Another object is to enable the reservoir to be held in a partially-compressed position by means of a friction device, and a further object is to lock the compressible reservoir in its extended position.

Referring to the drawings, Figure 1 is a face view of a fountain-pen embodying the several features of my invention. Fig. 2 is a sectional view taken on line 2 2, Fig. 1, the reservoir being shown as locked in its extended position. Fig. 3 is a similar sectional view, partly broken away, showing the ink-reservoir as partly compressed. Fig. 4 is a sectional view taken on line 4 4, Fig. 3. Fig. 5 is a perspective view of the detached movable piston. Fig. 6 is a perspective view of the detached friction device for holding the piston in its adjusted position. Fig. 7 is a sectional view of a modified form of frictional holding means for the compressed reservoir. Fig. 8 is a perspective view of the detached friction-spring seen in Fig. 7.

Similar reference characters indicate corresponding parts in all the views.

In the drawings I have shown a fountain-pen consisting of a tubular case 1, which is open at both ends and is provided with lengthwise slots 2 in its opposite side walls, one end of the tube being threaded exteriorly, and receives the pen-supporting plug or nipple 3, while the opposite end is provided with a removable head 4, a suitable cap 5 being adapted to be slipped over either the penholder 3 or cap 4 in the usual manner.

The penholder 3 is provided with the usual lengthwise ink-passage, not necessary to herein illustrate or describe, but which communicates in a practical manner with the interior of a flexible bulb or ink-reservoir 6, formed of rubber and having one end secured to a nipple 7, provided upon the inner end of the penholder 3, and its other end extends to a point in proximity to the cap 4 and is secured to a nipple 8, which forms a part of a piston 9. This piston is provided with an annular groove 10, which receives a split ring 11, having radial lugs 12, projecting through the slots 2 beyond the periphery of the tube 1. This split ring 11 is formed of spring material and is tensioned to automatically impinge against the inner surface of the tube 1, and its inner diameter is slightly greater than the diameter of the piston at the base of the groove 10, so as to permit the ring to be compressed, and thereby disengaged from the inner walls of the tube 1. The piston 9 is movable lengthwise of the tube 1 for compressing and extending the bulb or ink-reservoir 6, and, together with said reservoir, serves as a pump for drawing the ink into the reservoir when the pen end is immersed in the ink.

The cap 4 is provided with an open-sided slot 13, which receives the lugs 12 of the split ring 11 and serves to hold the flexible ink-reservoir in its extended position. When it is desired to fill the reservoir, the cap 4 is rotated to aline the open side of the slot 13 with the studs 12, whereupon the studs are engaged by the operator, and the split ring may thereby be slightly compressed. The pen end of the holder 3 is then inserted into a body of ink, and the piston is moved by hand back and forth until the reservoir is entirely filled, whereupon the piston is returned to its normal starting position, with the lugs 12 alined with the slots 13 and the cap 4 rotated to lock the piston from further endwise movement. It sometimes happens that the ink does not feed readily from the reservoir to the pen, in which instance the piston is again unlocked and moved endwise toward the holder 3 a sufficient distance to force the ink from the reservoir to the tip of the pen, and the compression of the split ring is then released to permit the spring to expand against the walls of the tube 1 and to hold by friction the piston in its adjusted position.

In Fig. 7 is shown a case 21, having a lengthwise slot 22 similar to that shown in Fig. 1, in which are movable spring-arms 23, attached to a reciprocally-movable head 24, this head being attached to one end of an endwise-compressible reservoir 25, the spring-arms 23 being compressible by hand, and are normally adapted to frictionally engage the inner faces of the case to hold the reservoir in its compressed position.

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

1. In a fountain-pen, a tubular case having a penholder in one end, a flexible tube within the case and having its end adjacent to the penholder fixed to said penholder from endwise movement and communicating with the interior of the holder, a manually-operated sliding member permanently attached to the other end of the tube to push and pull it endwise irrespective of the penholder and case which incloses the flexible tube.

2. In a fountain-pen, the combination with a tubular case and a penholder at one end of the case, a flexible ink-reservoir within the case and attached at one end to the penholder, the other end of the ink-reservoir being movable endwise and automatic means for holding said movable end in its adjusted position.

3. In a fountain-pen, the combination of a case having a penholder, a flexible ink-reservoir within the case, one end of the reservoir being fixed to the penholder and communicating therewith and the other end being movable endwise and a friction device for holding the movable end of the reservoir in its adjusted position.

4. A fountain-pen comprising a tubular case having a penholder and a lengthwise slot, a compressible and extensible ink-reservoir connected at one end to the penholder and having its other end movable endwise and a friction device projecting through the slot and operating to hold the movable end of the reservoir in its adjusted position.

5. In a fountain-pen, a tubular case having a lengthwise slot, a penholder in one end of the case, a flexible tube in the casing having its end adjacent to the penholder permanently communicating with the interior of the holder, a manually-operated member projecting into the slot in the case and operatively connected to the other end of the flexible tube to move the same endwise relatively to the slot and irrespectively of the penholder for the purpose described.

6. A fountain-pen comprising a tubular case having a lengthwise slot, a penholder in one end of the case, a compressible and extensible ink-reservoir within the case and communicating with the interior of the penholder, a piston connected to the other end of the reservoir and movable endwise, and manually-operated means attached to the piston and projecting through the slot whereby the piston may be moved endwise.

7. In a fountain-pen, a tubular case and a penholder, a compressible and extensible tube within the case fixed at one end and communicating with the interior of the penholder, and means projecting through the side wall of the case for moving the other end of the tube endwise, said means operating automatically to hold the tube in its adjusted position.

8. In a fountain-pen, a tubular case and a penholder, a compressible and extensible tube within the case fixed at one end and communicating with the interior of the penholder, means for moving the other end of the tube endwise, and a split ring connected to the movable end of the tube and tensioned to engage the inner walls of the case for holding said movable end in its adjusted position.

In witness whereof I have hereunto set my hand this 18th day of December, 1902.

THOMAS WHEATLEY.

Witnesses:
H. E. CHASE,
MILDRED M. NOTT.