

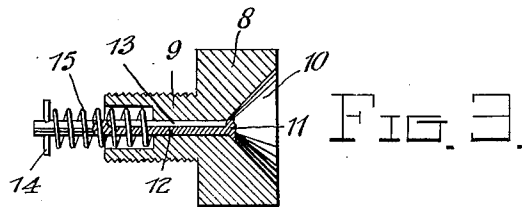
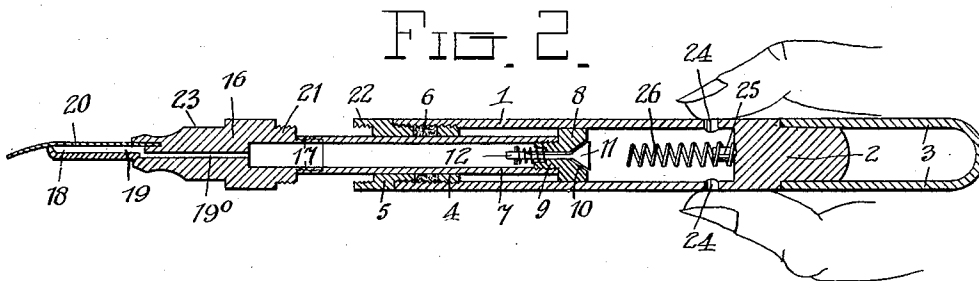
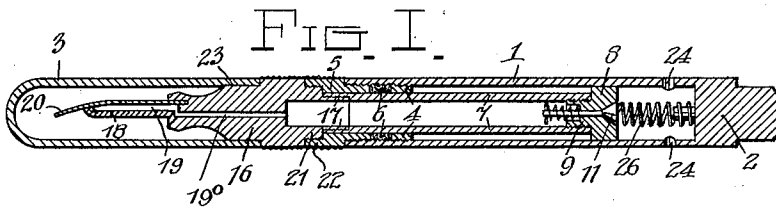
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F. J. & A. OBERDOERSTER.

FOUNTAIN PEN.

APPLICATION FILED NOV. 27, 1907.



Witnesses

J. Milton Jester.
Myron G. Clear.

Inventors

Adolph and Frank J. Oberdoerster,

By

P. L. Parker

Attorney

UNITED STATES PATENT OFFICE.

FRANK J. OBERDOERSTER AND ADOLPH OBERDOERSTER, OF AKRON, OHIO.

FOUNTAIN-PEN.

No. 884,412.

Specification of Letters Patent.

Patented April 14, 1908.

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To all whom it may concern:

Be it known that we, FRANK J. OBERDOERSTER and ADOLPH OBERDOERSTER, citizens of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

Our invention relates to fountain pens and particularly contemplates the provision of a novel and efficient construction whereby the same may be readily, quickly and easily refilled when desired.

Our invention further and specifically resides in the following features of construction, arrangement and operation to be hereinafter described with reference to the accompanying drawings forming a part of this specification, in which like numerals are used to designate like parts throughout the several figures, and in which

Figure 1 is a central longitudinal sectional view taken through our improved fountain pen in the closed position. Fig. 2 is a similar view taken through the same in the open position and illustrating its manner of operation at the start and during the operation of refilling it with ink, and Fig. 3 is a central sectional view taken through the valved head of the ink tube, and showing the valve stem projecting therethrough and partly in section.

In the practical embodiment of our invention we provide an outer tubular casing 1 having its rear end 2 closed and provided with a reduced portion for the reception of the tubular cap 3 when the pen is in use. The forward end of the outer tubular casing 1 is provided with an internally threaded portion adapted to receive a retaining ring 4 and the coupling ring 5 screwed therein and between which is preferably disposed a packing ring 6, said retaining ring, coupling ring and packing ring bearing upon the circumferential face of the ink tube 7 slidably mounted therethrough with its inner end projecting within the bore of the casing 1 and provided with an internally threaded portion therein. A valved head 8 provided with a threaded nipple 9 adapted to be screwed within the inner end of the ink tube 7, is provided with a central opening therethrough and through said nipple portion and with a conical cavity 10 in said head at the end of said opening. Arranged within said conical cavity 10 is a conical valve 11 having its stem 12 projecting

through said opening and provided with a longitudinal groove 13 of substantially greater length than the length of said opening through which it projects. At its opposite end from the valve 11 the stem 12 is provided with a pin 14 projecting therefrom at right angles to its diameter and between which and the nipple 9 a coil spring 15 extends and is coiled about the stem 12, said spring being tensioned to draw the valve 11 firmly within the conical cavity 10 which it fits. The ink tube 7 is provided upon its outer end with an ink head 16 provided with a reduced threaded end 17 to screw within the internal threaded outer end of the ink tube 7, and with a feeder 18 extending forwardly therefrom and having a longitudinal channel 19 communicating with, though offset from a central longitudinal opening 19^o through the head 16, said opening and said channel being adapted to feed the ink from the tube 7 to the pen point 20 extending from the feeder head 16, for the reception of the same.

The head 16 is provided with a circular shoulder 21 adjacent its reduced end 17, and threaded upon its circumferential surface, while the coupling ring 5 of the outer tube 1 is provided with a circular flange 22 internally threaded to allow said threaded shoulder 21 to be screwed therein to couple the parts ready for use. The feeder head 16 is further provided with a reduced portion 23 adapted to receive thereon the tubular cap 3 when the cap is in disuse, said cap 3 being transferred to the reduced portion of the closed end 2 of the outer casing 1 when the pen is in use as is well known. Adjacent its rear closed end 2 the outer casing 1 is provided with a pair of diametrically opposite openings 24, while said closed end 2 is provided with a pin 25 extending centrally therefrom within the bore of the outer casing 1 and provided with a coil spring 26 secured thereabout and extending therefrom in said bore, in alinement with the valve 11 of the ink tube 7.

In the operation of our device and with particular reference to Fig. 2; when the device needs to be refilled, the feeder head 16 is first rotated to unscrew the same from the coupling ring 5 and the feeder 18 is thrust and held within a quantity of ink in an ink well or the like. The operator then grasps an ink head with his left hand and places the forefinger and the thumb of his right hand

over the openings 24 respectively and slowly draws the outer casing 1 outward upon the ink tube 7, thus causing the vacuum within the outer casing 1 to draw open the valve 11 and to suck the ink up through the feeder opening 19 into the ink tube 7. The fingers are then released and the casings telescoped once more to their normal position and locked by screwing the head 16 within the coupling ring 5 to the position shown in Fig. 1. The ink tube 7 will by this means be almost entirely filled while no ink will be allowed to escape within the outer casing 1, while in a normal position ready for use the coil spring 26 will bear against the valve 11 to prevent the same moving from its seat.

Having thus fully described our invention, we claim:

1. In a fountain pen, the combination of an outer casing, an ink tube slidably mounted within said casing and provided with a feeder and pen point upon its outer end, said ink tube having a valved inner end, and said outer casing having means whereby a vacuum may be formed therein when the same is drawn rearwardly upon said ink tube to draw the ink upwardly within said tube, substantially as described.

2. In a fountain pen, the combination with an outer casing, an ink tube slidably

mounted therein, said ink tube having a valved inner end and being provided with a feeder and pen point upon its outer end, means for normally locking said ink tube and said outer casing together, and means whereby a vacuum may be formed within said outer casing when the same is drawn rearwardly upon said ink tube, to draw the ink upwardly in said tube, substantially as described.

3. In a fountain pen, the combination of an outer casing, an ink tube slidably telescoping mounted therein and provided with an inner valved end, a pen point and ink conducting mechanism removably secured to the outer end of said ink tube, means for locking said ink tube and said casing together and means whereby a vacuum may be formed within said outer casing when the same is moved rearwardly upon said ink tube, to draw the ink within said tube, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK J. OBERDOERSTER.
ADOLPH OBERDOERSTER.

Witnesses:

WALTER HERBERICH,
GEO. W. MERZ.