

No. 851,081.

PATENTED APR. 23, 1907.

C. A. FABER.
SELF FILLING FOUNTAIN PEN.
APPLICATION FILED AUG. 3, 1905.

Fig. 4

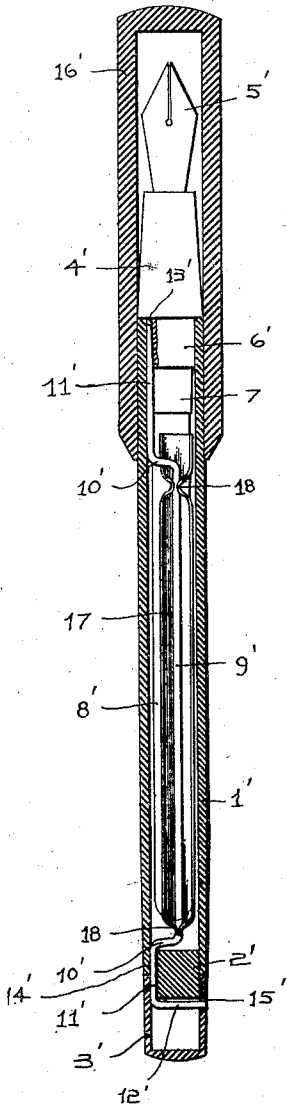


Fig. 1.

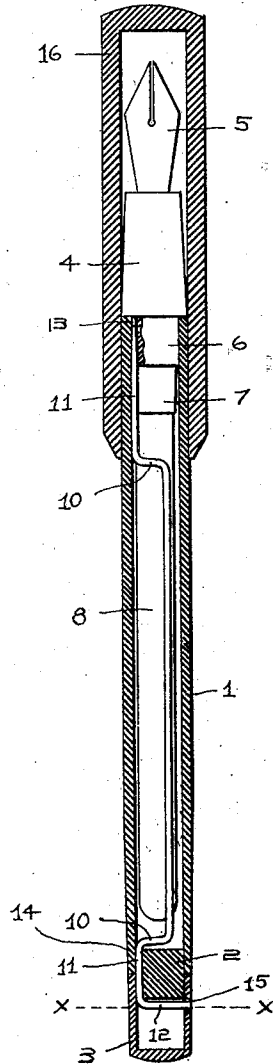


Fig. 2 -

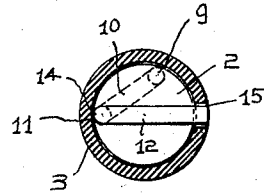
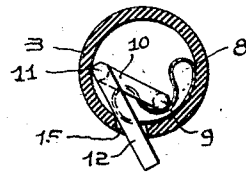


Fig. 3 -



witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES A. FABER, OF TOLEDO, OHIO.

SELF-FILLING FOUNTAIN-PEN.

No. 851,081.

Specification of Letters Patent.

Patented April 23, 1907.

Application filed August 3, 1905. Serial No. 272,486.

To all whom it may concern:

Be it known that I, CHARLES A. FABER, residing at No. 2046 Ashland avenue, in the city of Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Self-Filling Fountain-Pens, of which the following is a specification.

My invention relates to self-filling fountain-pens, of that class in which an elastic ink-reservoir is contained in a hollow pen-holder.

One object of my invention is to provide an improved means of operating the device by which the pen is cleaned, and the reservoir filled.

Another object is to provide a pen-holder of a smooth and finished appearance, in which no part of the self-filling mechanism is left protruding or detachable.

Further objects of my invention will appear in the novel construction, combination and arrangement of parts hereinafter described and claimed, and illustrated in the drawings, in which—

Figure 1 is a longitudinal section through a pen constructed in accordance with my invention; Fig. 2 is a cross-section through the same at the line X X Fig. 1, showing the engagement of the swivel-cap with the operating-lever; Fig. 3 is a like cross-section, showing the reservoir collapsed and for clearness the tenon removed; and Fig. 4 is a longitudinal section, showing the compression-lever equipped with a compression-plate.

Similar reference numerals indicate similar parts throughout the several views.

The holder is made in three sections that, when united, form one continuous and smooth pen-holder. The principal section, 1, is made hollow, to contain the ink-reservoir and compression-lever. At one end is a tenon, 2, adapted to engage the swivel-cap, 3, rotatably mounted thereon. The other end is open to admit the insertion of the compressor-lever, the ink-reservoir and the pen-section, 4. Said pen-section is of the type common to self-filling fountain-pens, having in its outer end the pen, 5, and on its inner end the tenon, 6, adapted to engage the section 1, and the neck, 7, adapted to engage the ink-reservoir, 8. Said ink reservoir is an elastic tube, preferably of soft rubber, closed at one end and cemented at the other upon the neck of the pen-section, through which

section is the usual ink channel and feed bar connecting the reservoir with the pen.

Within the section 1, and between the wall thereof and the ink-reservoir, is a compression-lever that comprises a compression-bar, 9, united by connecting-arms, 10, to the pivots, 11, and through one of the said pivots to the operating-lever, 12. Said parts 9 to 12 inclusive are preferably made of one continuous piece of non-corrosive, tempered, wire, bent at the several places and angles required to form the several parts. To provide bearings for the pivots 11 I cut a groove, 13, on one side of the tenon 6, and drill an aperture, 14, in alinement with said groove, through the tenon 2. The compression-lever, when formed, is placed within the section 1 and is held firmly against the interior thereof, in the position it assumes when the ink-reservoir is fully expanded. The wire, protruding through the bearing 14, is then inserted through an aperture, 15, in the side of the swivel-cap 3, and is bent in a direction diametrically across the tenon 2. As the swivel-cap settles into its place upon the tenon the bend in the wire, necessary to form the lever 9, is completed; and the swivel-cap is at the same time locked, by said lever, upon the tenon, in such a way as to prevent its removal therefrom while not preventing its rotation thereon, for a sufficient arc of the circle to operate said lever, and through it the compression-lever. The wire is then cut off even with the outer surface of the swivel-cap.

For protection of the pen, and as an extension of the holder, I provide the cap, 16, in common use on fountain-pens. In order to prevent said cap from engaging either one of the short sections of the holder, the same is made slightly tapering at each end.

In practical use of the device I have found that the form and size of the wire compressor-lever is such as to give a very satisfactory degree of compression to the ink-reservoir. But a more complete compression is obtainable by the use of a compressor-plate, 17, of thin metal, extending the entire length of the bar 9, and hinged thereto by clips, 18, at each end of the bar. I therefore desire to describe and claim the use of such compressor-plate as an alternate form of construction. Said plate 17 is convex, to conform to the curve of the holder into which it is pressed, and it extends under, and a little beyond, one of the connect-

ing-arms 10', to prevent any tendency the plate may have to turn over upon the lever. Being supported throughout its length by the bar 9', resting upon the concave surface thereof, said plate is made very thin, and partially encircling the bar it occupies a comparatively small space within the holder, and does not make necessary any reduction in the size of the ink-reservoir.

10 The construction, and arrangement, of the parts being thus made known, it is thought that the method of cleaning and filling the pen will be readily understood.

On turning the swivel-cap toward the right the aperture 15 comes within a shorter radius from the bearing 14, thus causing the operating lever to protrude beyond the surface of the swivel-cap at all times while said lever is out of its original position, which is diametrically across the tenon. The further the cap is turned the further the operating-lever protrudes, until it is stopped by the compression-bar reaching the further side of the interior of the holder. Thus is furnished a visual means of determining the position of the compression-lever within the holder. Moving the compression-bar, or plate, down upon the ink-reservoir collapses the same, expelling the air or the liquid therein contained. Then, with the end of the pen section inserted into the ink, a reverse turn is given to the swivel-cap, returning all of the operating parts to their original position. The ink-reservoir, relieved from the pressure of the lever, expands and fills with ink. Should the feed or channel become clogged, or should the ink thicken in the reservoir, the trouble is easily remedied by forcing water, or thin ink, through the channel, by the process above described, until all obstructions are removed.

The friction of the swivel-cap upon the tenon is sufficient to guard against any accidental turning of the lever.

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

1. In a self-filling fountain pen, the combination with an elastic ink-reservoir of a principal section of the penholder, a compression lever pivoted at both ends within the principal section of the holder, an operating-lever external to the principal section of the holder integral with the compression-lever and engaging the swivel-cap, and a swivel-cap adapted to cover and protect the operation lever and to furnish means by which the same is operated.

2. In a self-filling fountain pen containing

an elastic ink-reservoir and a compression lever parallel with the reservoir and pivoted at each end of the principal section of the holder, an operating-lever integral with the compression-lever and external to the principal-section of the holder; a rotatable extension of the penholder, engaging the operating-lever, adapted to protect said lever and furnish means by which it is operated; and a compression-plate hinged upon the compression-lever, parallel with the same and adapted to more completely collapse the ink-reservoir.

3. In a self-filling fountain pen, the combination of a pen-section, an elastic ink-reservoir attached thereto and a pen therein with an ink-channel and feed-bar leading from the reservoir to the pen, a hollow principal-section of the penholder adapted to contain the reservoir, a compression-lever extending longitudinally between the reservoir and the principal-section of the holder and pivoted at each end thereof, an operating-lever integral with the compression-lever and external to the principal-section of the holder, and a rotatable extension of the holder adapted to cover the operating-lever and to furnish means by which it is operated, having an aperture in the side thereof adapted to engage the operating-lever.

4. In a self-filling fountain pen of the character described, a hollow principal-section of the pen-holder, an elastic ink-reservoir therein, a compression-lever therein pivoted at each end thereof, and a presser-plate hinged upon the compression-lever and adapted to more completely collapse the elastic ink-reservoir.

5. In a self-filling fountain pen of the character described, a hollow principal-section of the pen-holder, an elastic ink-reservoir therein, journals at either end thereof adapted to engage the pivots of a compression-lever, and a compression-lever therein made of a continuous piece of wire, bent at the proper places and angles, comprising a presser-bar, an offset at each end thereof, a pivot extending from each offset in a line parallel with the presser-bar, and an operating lever at substantially a right angle to one of the pivots and external to the principal-section of the holder.

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

CHARLES A. FABER.

Witnesses:
 CORA A. FABER.
 S. M. YOUNG.