

PATENT SPECIFICATION



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151,844

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COMPLETE SPECIFICATION.

Improvements in Fountain and other Reservoir Pens.

I, DUNCAN CAMERON, Waverley Works, Blair Street, Edinburgh, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to fountain and other reservoir pens of the self-filling type comprising a collapsible ink container or sac which is adapted to be depressed or deflated by means of a pressure bar jointed to an operating bar, so that on the former being released or withdrawn by means of the latter the ink-container draws up the ink, so as to fill the pen.

The object of the invention is to provide improved and more efficient means for actuating the pressure bar in order to depress the ink container, when required.

According to this invention I provide fountain and other reservoir pens of the type specified, wherein the operating bar or rod is jointed to the pressure bar by means of parallel-motion links, the one end of the pressure bar being anchored to the point-section of the pen, or to the pen barrel.

Figure 1 of the accompanying drawings is a longitudinal section through a fountain pen constructed in accordance with this invention, showing the two bars closed together, as when the pen is in use.

Figure 2 shows a section on the line x , Figure 1 upon a larger scale.

Figure 3 represents a longitudinal section through the pen after the pressure bar has been forced down by the links so as to depress the ink container.

Figure 4 is a section through one end

of the pen upon a larger scale, showing more clearly the manner in which the pressure-bar depresses the ink-container.

Figure 5 represents a section on the line x^1 , Figure 4. 45

Figure 6 is an edge view of the operating bar and pressure bar when closed together, and shown separated from the pen barrel.

Figure 7 is plan view of same. 50

The same reference numerals indicate corresponding parts in each of the figures.

Referring to the drawings, the improved pen comprises a rubber ink-container or sac 1 attached at its open end to the point section 2 of the pen, the said container or sac lying within the barrel portion 3, as shown. Arranged within the barrel 3, so as to engage with one side of the flexible ink-container 1, is a longitudinally disposed pressure-bar 4, whilst jointed to the said bar 4 by means of a pair of parallel-motion links 5, is an operating bar 6, disposed immediately above the bar 4 and arranged between the latter and the pen barrel 3. At the points of attachment of the links 5 the bars 4 and 6 are preferably cut away so as to leave cross bars around which the extremities of the links 5 are curled. The inner end of the pressure bar 4 is anchored to the point section 2 of the pen by means of a flexible metal strip or spring 7 having integral lateral extensions 8 which are bent around the reduced inner end of the point-section, so as to form a collar for securing the sac, as shown; or the said end of the pressure bar may be fixed or anchored in any other suitable manner. The outer end of the barrel 3 is closed by 80

[Price 1/-]

a screw-plug 9 or a plain shouldered plug to which the outer end of the operating bar 6 is fixed, in such a manner as to admit of the rotation of the plug 9 without interfering with the bar 6, the end of the latter being cranked inwards and attached to the centre of the screw plug 9, as shown more clearly in Figures 6 and 7. When the plug 9 is screwed into the end of the barrel 3 the two bars 4 and 6 are arranged so as to lie close together, the links 5 lying in substantially the same plane as the said bars, so that no pressure is exerted on the ink-container 1. When it is desired to refill the pen, the point-section 2 is inserted in the ink and the plug 9 unscrewed, when it is drawn outwards into the position shown in Figure 4, thus moving the operating bar 6 longitudinally and causing the links 5 to open out so as to force the pressure bar 4 against the ink-container 1, the latter being thus depressed. The plug is then moved inwards, causing the bars 4 and 6 to close together against the inner wall of the barrel 3, so that the ink-container 1 expands and assumes its normal condition, the ink being thus drawn into the same. The plug 9 is then screwed if necessary, into the end of the barrel 3. To admit of the plug 9 being fully unscrewed or withdrawn without imparting motion to the operating bar 6, it is formed with a central recess 10 (see Figure 7) within which the spread-out extremity of the bar 6 is housed, the said spread-out extremity normally lying within the recess 10 and being arranged so as to engage with a shoulder at the lower end of the

recess when the plug 9 has been fully unscrewed, so that further longitudinal movement of the plug actuates the operating bar 6. To serve as a guide when rescrawing the plug 9 it is provided with a plain extension 11 which remains in engagement with the end of the pen barrel 3 when the plug is drawn out.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In fountain and other reservoir pens of the type specified, jointing the operating bar or rod to the pressure bar by means of parallel-motion links, the one end of the pressure bar being anchored to the point-section of the pen, or to the pen barrel, substantially as and for the purpose herein described.

2. In fountain and other reservoir pens as claimed in Claim 1; connecting the one end of the operating rod to a plug member adapted to screw into the end of the pen-barrel, substantially as described.

3.—The improved construction of fountain or other reservoir pen substantially as herein described and set forth by the accompanying drawings.

Dated this 31st day of October, 1919.

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Fig. 1.

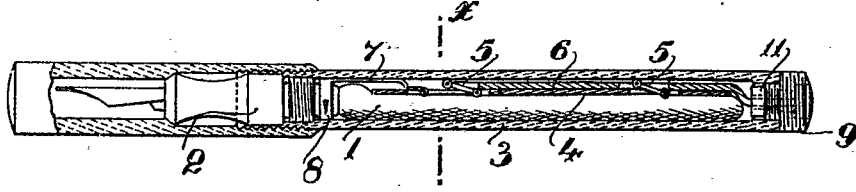


Fig. 2.

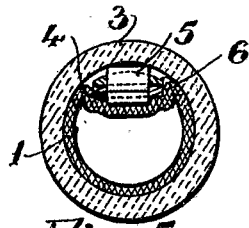


Fig. 5.

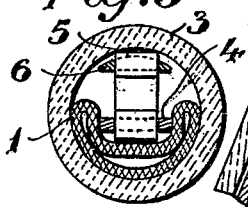


Fig. 4.

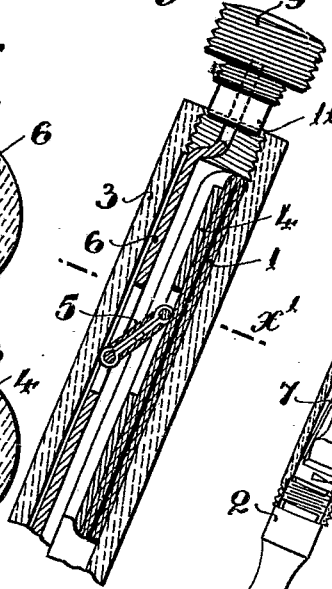


Fig. 3.

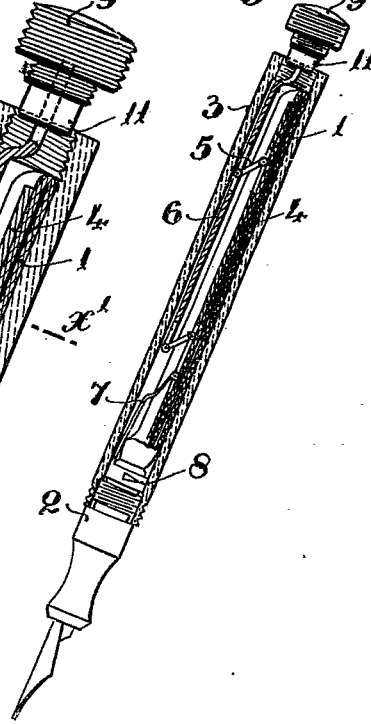


Fig. 6.

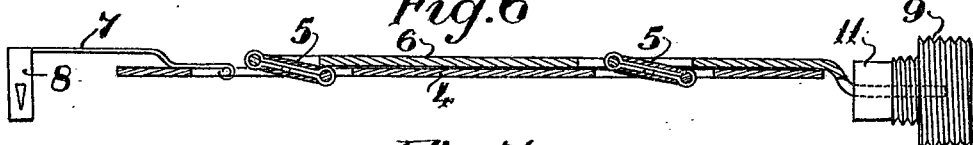


Fig. 7.

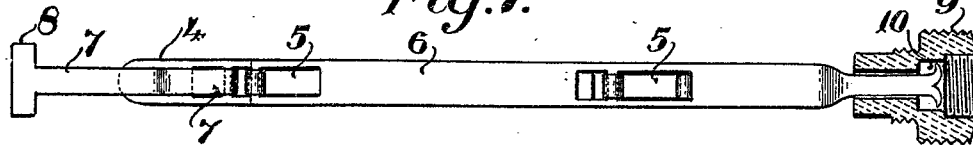


FIG. 1. FIG. 2. FIG. 3. FIG. 4. FIG. 5. FIG. 6. FIG. 7.