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## AMENDED SPECIFICATION.

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## PATENT SPECIFICATION

345,564



Application Date: May 17, 1930. No. 15,243/30.

Complete Accepted: March 26, 1931.

COMPLETE SPECIFICATION (AMENDED).

### Device for Automatically Filling Fountain Pens.

I, ARMANDO SIMONI, of 4, via degli Orbi, Bologna, Italy, a subject of the King of Italy, 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 a device for automatically filling fountain pens of the type in which the reservoir encloses a sac of elastic or resilient material such as rubber or the like closed at its upper end and connected at its lower end to the feed conduit. For filling fountain pens of this type with ink it is necessary to compress the sac so as to expel the air contained therein and then to release it causing it to resume its initial form by elasticity after the nib has been dipped into the ink, this latter being forced by the atmospheric pressure into the sac and filling same

This invention has for its object a simple, strong, unobtrusive and easily operable device for compressing the sac on its whole length for the purpose specified above. The device according to this invention is of small size so that it does not reduce the capacity of the reservoir.

The device comprises a strip of metal or other suitable material, articulated to a lever capable of oscillating transversely in the reservoir under the action of a rotatable eccentric on a longitudinal pin which passes through a plug fitted on the upper end of the reservoir and ends in a milled button. A suitable cap screwed on the end of the reservoir covers the milled button. By turning this latter, the metal strip is displaced from its normal position in which it lies against the reservoir wall and in which the sac is freely expanded in the reservoir, into a position close to the opposite wall of said reservoir in which it compresses against this latter the sac expelling all the air contained therein in order to fill the pen with ink.

The accompanying drawing shows dia-  
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grammatically by way of example a constructional form of this invention.

Figures 1 and 2 are partial longitudinal sections of the fountain pen in the position in which the sac is compressed for expelling air and in the position in which the sac is expanded in order to draw in the ink, respectively.

Figure 3 is a cross section on line III—III of Figure 1.

Figures 4 and 5 are cross sections on lines IV—IV and V—V of Figures 1 and 2, respectively.

1 denotes the reservoir of the fountain pen closed at its upper end by a plug 2 through which passes a pin 3 ended outside the reservoir 1 by a milled button 4 and inside said reservoir by an eccentric 5.

Laterally of the plug 2 is rotatably mounted on a pin 6 a lever 7 the other end whereof is articulated at 8 to the metal strip 9.

The lever 7 is provided with an extension 7<sup>1</sup> embracing the eccentric 5 on the side opposite the end of the lever 7 pivoted at 6.

The eccentric 5 is provided with a tooth 5<sub>1</sub> which acts as a stop for the button 4 when this latter is rotated into the position shown on Figures 1, 3 and 4 in order to compress the sac 13 as well as when it is brought into the position shown in Figures 2 and 5 in which the sac is free to expand. In said positions the tooth 5<sub>1</sub> contacts with the sides of the lever 7 (Figure 4) and of its extension 7<sub>1</sub> (Figure 5), respectively. In order to ensure a reliable working of the lever 7, the extension 7<sub>1</sub> is guided between shoulders 10 on the plug 2.

The milled button is normally protected by a screw plug 12. The reservoir 1 is formed with an inner groove 11 in which is lodged the end of the lever 7 thus leaving the whole space free for the sac against which rests the thin metal strip 9.

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I have become aware of Patent Specification No. 348,036 which discloses a filling device of a type similar to mine. The device according to this Patent Specification No. 348,036 however differs from mine, in that its operating lever is free to oscillate independently of the eccentric, whilst in my device, the operation is positive (desmodromic).

10 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:—

15 1. Self-filling fountain-pen with a sac of rubber or the like enclosed in the reservoir, comprising a strip of metal or other suitable material articulated to a lever which oscillates transversely in the reservoir under the action of a rotatable eccentric on a pin extending longitudinally through a plug fitted on the upper end of the reservoir and ended outside this latter by an operating milled button.

25 2. Self-filling fountain-pen as claimed in claim 1, wherein the lever pivoted at one end to the plug and carrying at its other end the metal strip for compressing the sac, is provided with an extension embracing the eccentric on the side opposite

the lever end which is pivoted to the plug so as to operate the said lever.

3. Self-filling fountain-pen as claimed in claims 1 and 2, wherein the lever end carrying the metal strip is lodged in a groove on the reservoir so as to leave free the largest possible space for the sac.

4. Self-filling fountain-pen as claimed in claims 1 to 3, wherein the eccentric is provided with a tooth acting as a stop against the sides of the lever pivoted to the plug and its extension in either end position.

5. Self-filling fountain-pen as claimed in claims 1 to 4, wherein the plug is provided with a suitable guide for the lever extension.

6. Self-filling fountain-pen substantially as herein described, with reference to the accompanying drawing.

Dated this 17th day of May, 1930.

HASELTINE, LAKE & Co.,  
28, Southampton Buildings, London,  
England, and  
19—25, West 44th Street, New York,  
U.S.A.,  
Agents for the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale.]

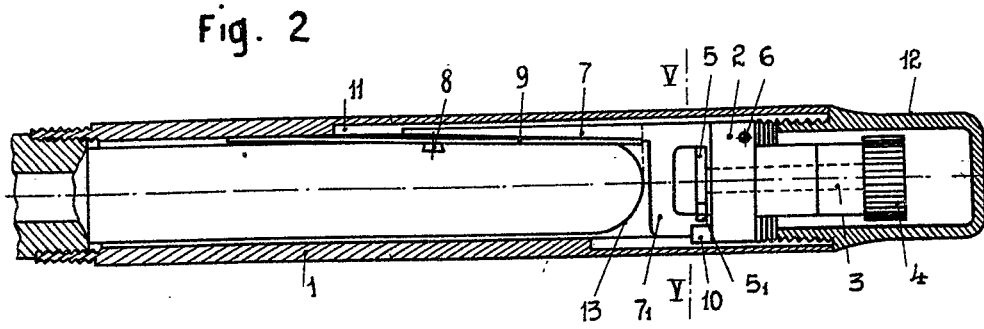
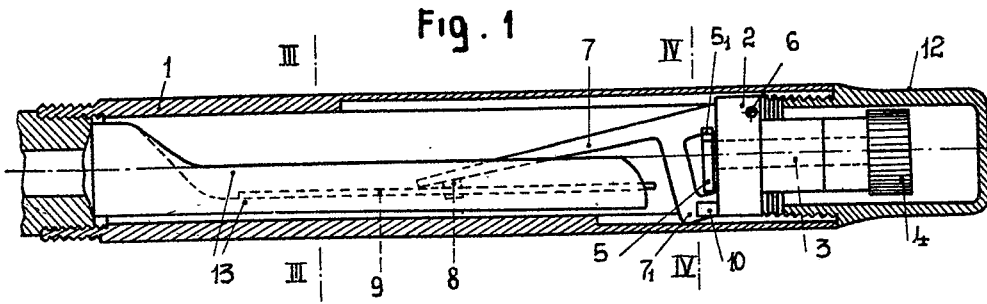


Fig. 3

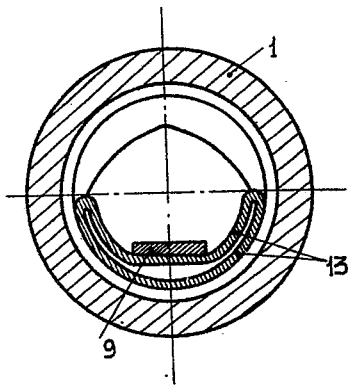


Fig. 4

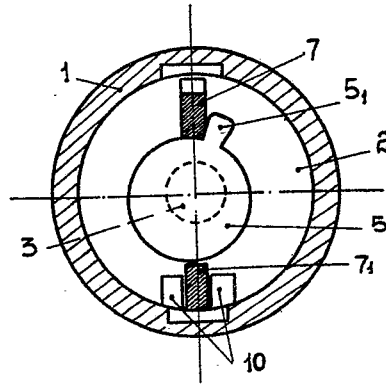


Fig. 5

