

Reprinted as amended under Section 8 of the Patents and Designs Acts, 1907 to 1932.

PATENT SPECIFICATION

Convention Date (Denmark): June 9, 1936.

466,012

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Complete Specification Accepted: May 20, 1937.



COMPLETE SPECIFICATION

Improved Fountain Pen

I, JOHANNES IVERSEN, of 2, Frederiksholms Kanal, Copenhagen, Denmark, of Danish nationality, 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 an improvement in fountain pens of the kind which are filled through means of a piston in an ink container. The piston may be connected with a diaphragm which in its normal position may be folded up and which by depression into the ink container and the following withdrawal will cause the ink to rise through the air tube when the pen is inserted into the ink. It is known in such fountain pens to use diaphragms which can be folded up when the piston is in its upper position so as to form a tight joint at the top of the ink container. In pens made of transparent material it is especially important that the diaphragm should not be visible and in the withdrawn position of the piston it should therefore be folded together and will therefore take up too much room. Furthermore it has in certain cases been necessary in previous constructions of this kind to employ a spring to maintain the piston in its withdrawn position.

According to the present invention these drawbacks are avoided in that instead of a diaphragm which can be folded together an elastic diaphragm such as rubber which surrounds the piston and which is not folded up, but will be stretched in a lengthwise direction when the piston is pressed downwards, is used to form a tight joint at the end of the ink container. Through the elasticity of the said diaphragm the piston will be returned to its upper position so that the spring usually employed is superfluous.

The preferred embodiment of the invention is illustrated in the accompanying drawing, wherein the ink container

is designated by the letter *a* and *c* is the elastic diaphragm. *b* is a socket provided with screw threads which serve to keep the diaphragm positioned and on the other end of which the cap or end piece of the pen is screwed after the filling of the same has taken place. The piston *d* is shown in its upper position.

When the pen is to be filled the end piece is removed and after the pen has been inserted in the ink the piston rod is pressed downwards and when through the elasticity of the diaphragm it has again been raised to its upper position ink will rise through the air tube. The ring *e* when the socket *b* is screwed on is pressed against the flange on the diaphragm *c* and prevents this from being pressed down into the ink container if the pressure on the piston rod is too strong.

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. Fountain pen adapted to be filled by means of a piston in an ink container and for the purpose of forming a tight closure in the ink container an elastic diaphragm is provided surrounding the piston characterised in this that the diaphragm closely fitting around the piston and not being adaptable to be folded up is adapted to be stretched in a lengthwise direction when the piston is pressed downwardly and solely due to its elasticity forces the piston back to its upper position when pressure is released.

2. The improved fountain pen substantially as described with reference to the accompanying drawing.

Dated this 31st day of December, 1936.

MARKS & CLERK.

Reference has been directed, in pursuance of Section 8, sub-section (2), of the Patents and Designs Acts, 1907 to 1932, to Specification No. 472,332.

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

