

PATENT



SPECIFICATION

Convention Date (Denmark), May 28, 1918.

Application Date (in the United Kingdom), Apr. 15, 1919. No. 9628 19.

Complete Accepted, Dec. 24, 1919.

COMPLETE SPECIFICATION.

Improvements in Stylographic Fountain Pens.

I, JÖRGEN THORVALD ANDERSEN, of Gundstrup, near Otterup, Island of Funen, Kingdom of Denmark, Watch 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:—

5 This invention concerns improvements in stylographic fountain pens.

It has been heretofore proposed in pens of this nature to provide in the barrel of the pen at a place in its length where it merges into the point a packing of hygroscopic material such as absorbent cotton, such pad being exposed to atmospheric influence on both sides. It has also been proposed in connection
10 with self-inking ruling pens to provide a pad of ink saturated material in a removable tube fitting within a handle, such pad supplying ink to a revolving wheel or roller in the inclined end of the tube.

According to this invention the hollow space of the ink receptacle communicating with the writing aperture is entirely or substantially entirely filled with a capillary or porous mass so that the ink is not present as a freely movable
15 liquid mass with a liquid level but is sucked up and held in the pores of the said mass, the hollow space and contained mass being exposed to atmospheric pressure at both ends. The mass is preferably inserted in a tubular member which fits into a holder of the shape commonly used for fountain pens, and
20 from which it can be easily removed. The said tubular member either terminates in, or is connected with a preferably curved hollow point that constitutes the writing part, this point being also filled with the porous mass.

The filling of the pen may be effected by dipping the tube point into ink which will, on account of the capillary action of the porous mass, be quickly
25 sucked up. The writing is due to the circumstance that the capillary action at the point of contact between the paper and the tube point is still more effective than is the capillary action in the porous mass within the point, and gradually, as the ink at the point is used, *i.e.*, as the pores are more or less emptied, ink will flow towards the point from the more filled part of the
30 porous mass above the point. The writing may consequently be continued until the total porous mass is moist to a very small degree.

A form of construction of the invention is shown diagrammatically on the accompanying drawing which shows the stylographic pen in longitudinal section.

35 The porous mass 3, constituting the ink receptacle may be of any suitable kind either solid or loose. In the form of construction, as illustrated, the porous mass is supposed to consist of a loose fibrous material, such as cotton.

[Price 6d.]

wool or wadding, asbestos or the like. This mass is inserted in a tube 4 of metal, ebonite, glass, china or the like, the one end of said tube being open while the other end is curved and pointed as shown, and formed with a capillary writing aperture 6. The point of the cone is curved so that the plane of the aperture 6 at the normal inclined writing position of the pen, is flush 5 with the plane of the paper, which will avoid scratching and uncertainty as to the flowing of the ink.

The tube 4 fits into the corresponding hollow space of a holder 7, which is of the usual fountain pen shape and arranged to receive at the writing end as well as at the opposite end, the usual cap. 10

This latter end is provided with an air channel 9, so that the mass 3, constituting the ink receptacle, is subjected to the atmospheric pressure at both ends.

The details as shown are not essential and may be varied in many ways. The filling may of course, be effected by means of a squirting or sucking device 15 or by complete immersion, but a characteristic feature, and one that is of special importance with regard to cleanliness is that the filling may be effected in the manner previously described.

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 20 what I claim is:—

1. A stylographic fountain pen in which the hollow space of the ink receptacle communicating with the writing aperture is entirely or substantially entirely filled with a capillary or porous mass so that the ink is not present as a freely movable liquid mass with a liquid level but is sucked up by and 25 held by the pores of the said mass, the hollow space and contained porous mass being exposed to atmospheric pressure at both ends, substantially as described.

2. A stylographic fountain pen as claimed in Claim 1, in which the porous mass is contained in a tubular member which terminates in, or is connected with a writing point, substantially as described. 30

3. A stylographic fountain pen as claimed in Claims 1 and 2 in which the tubular member is removably inserted in a holder of the kind commonly used for fountain pens, substantially as described.

4. In a stylographic fountain pen as claimed in Claims 1, 2 and 3 the construction according to which the hollow writing point is of curved formation 35 substantially as and for the purpose described.

5. In a stylographic fountain pen of the kind set forth in Claim 1, the provision of an air channel in the holder, so that the porous mass will always be subjected at both ends to atmospheric pressure, substantially as described.

6. A stylographic fountain pen constructed and adapted to be filled substan- 40 tially as hereinbefore described with reference to the accompanying drawing.

Dated this 15th day of April, 1919.

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Fig. 1 is a longitudinal section of the instrument.

