

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION

Improvements in or relating to Fountain Pen Barrels and the like

We, THOMAS DE LA RUE & COMPANY, LIMITED, a Company organised under the laws of Great Britain, and EDWARD GIBSON KNIGHT, British subject, both of 110, Bunhill Row, London, E.C.1, do hereby declare the nature of this invention to be as follows:—

This invention relates to an improved construction of the barrels of fountain pens and the like of the kind comprising transparent material through which the level of the ink may be inspected.

According to the invention the barrel, or a part of it, corresponding to a certain length of the ink chamber, is made partly of transparent material and partly of relatively opaque material arranged in a mesh pattern so that the transparent material is divided into a numerous number of small windows surrounded by relatively opaque material. The pattern is such that in normal aspect the barrel apparently is not of transparent character, and is given a pleasing appearance by the opaque material which dominates the vision, but when held to the light the level of the ink can be readily observed, the numerous number of minute windows on both near and far sides, each of which windows preferably has dimensions somewhat greater than the width of the opaque bordering line, ensuring that a large majority of them are open to the line of vision irrespective of the angle at which the pen is held to the light.

The pattern may be produced by forming a block by superposing and compressing alternate layers of the respective materials in a plastic condition, then slicing the block

across the laminations, e.g. at right angles, so as to obtain a line pattern, and afterwards superposing and compressing two such sliced layers arranged with their respective line patterns crossing. The material with the final pattern is then brought to tubular form by wrapping or by helically winding a strip around a core or former; the adjoining edges in either case being suitably welded or cemented together.

The transparent material and the relatively opaque material preferably have the same basic composition, e.g. substances such as nitrocellulose, or cellulose esters or ethers, one batch being coloured as desired without destroying transparency, and the other batch being more deeply coloured and/or filled so as to make it substantially non-transparent, though it may be to a certain extent translucent.

The mesh or network pattern in the barrel of the pen, produced as above described, and with meshes, say ten to twenty to the linear inch, and with the windows say approximately twice as wide as the dividing lines of the relatively opaque material, will be found to appear to be non-transparent on casual observation but will be clearly transparent when held up to the light so that the ink content inside the barrel can be inspected.

Dated this 8th day of July, 1937.

CARPMAELS & RANSFORD,

Agents for Applicants,
24, Southampton Buildings, London,
W.C.2.

COMPLETE SPECIFICATION

Improvements in or relating to Fountain Pen Barrels and the like

We, THOMAS DE LA RUE & COMPANY, LIMITED, a Company organised under the laws of Great Britain, and EDWARD GIBSON KNIGHT, British subject, both of 110, Bunhill Row, London, E.C.1, 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 state-

[Price 1/-]

ment:—

This invention relates to an improved construction of the barrels of fountain pens and the like of the kind comprising transparent material through which the level of the ink may be inspected.

It has previously been proposed to construct fountain pens with barrels formed of transparent or translucent non-vitreous

material and to decorate such barrels by embedding in the walls of the barrels a mesh-work of wires or filigree metal.

According to the invention the barrel, or part of it, corresponding to a certain length of the ink chamber, is made partly of transparent material and partly of relatively opaque material arranged in a mesh pattern so that the transparent material is divided into a numerous number of small windows surrounded by relatively opaque material. The pattern is such that in normal aspect the barrel apparently is not of transparent character, and is given a pleasing appearance by the opaque material which dominates the vision, but when held to the light the level of the ink can be readily observed, the numerous number of minute windows on both near and far sides, each of which windows preferably has dimensions somewhat greater than the width of the opaque bordering line, ensuring that a large majority of them are open to the line of vision irrespective of the angle at which the pen is held to the light.

The manner in which the mesh pattern according to the invention is preferably produced, and two alternative patterns are illustrated in the accompanying drawing, wherein figure 1 shows a block formed of alternate layers of transparent and relatively opaque materials, figure 2 a composite block showing the mesh pattern, whilst figures 3 and 4 show finished pens having the alternative patterns.

Referring to the drawing the pattern is produced by forming a block by superposing and compressing alternate layers 1 and 2 of the transparent and relatively opaque materials in a plastic condition, then slicing the block across the laminations, e.g. at right angles along the dot and peck line 4, 4, so as to obtain a line pattern, and afterwards superposing and compressing into a block sliced layers 3 alternately with layers 2 of the relatively opaque material, the block being subsequently sliced along the dot and peck line 6—6 to produce the mesh pattern appearing on the end face 7 of the block. The material with the final pattern is then brought to tubular form by wrapping or by helically winding a strip around a core or former; the adjoining edges in either case being suitably welded or cemented together. In figure 3 the barrel 5 has been produced by helically winding a mesh patterned strip, whilst in figure 4 the strip has been simply wrapped and cemented along a line running longitudinally of the

barrel.

It will be appreciated that, if desired, only a portion—say the upper half, of the barrel need be formed in accordance with the invention.

The transparent material and the relatively opaque material preferably have the same basic composition, e.g. substances such as nitrocellulose, or other cellulose esters or ethers, one batch being left clear or lightly coloured as desired without destroying transparency, and the other batch being more deeply coloured and/or filled so as to make it substantially non-transparent, though it may be to a certain extent translucent.

The mesh or network pattern in the barrel of the pen, produced as above described, and with meshes, say eight to sixteen to the linear inch, and with the windows say approximately one and a half to twice the width of the relatively opaque frames, the exact proportion depending to some extent on the wall thickness of the particular pen barrel in which the material is to be used, will be found to appear to be non-transparent on casual observation but will be clearly transparent when held up to the light so that the ink content inside the barrel can be inspected.

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

1. A fountain pen whereof at least a part of that portion of the barrel forming the ink chamber is formed partly of transparent material and partly of relatively opaque material arranged to provide a mesh pattern of a large number of opaquely framed windows, the pattern being such that the barrel appears normally to be opaque, but when held up to the light is sufficiently transparent for the level of ink in the chamber to be seen.

2. A fountain pen as claimed in claim 1 and wherein the mesh pattern is reproduced about eight to sixteen times to the inch, and the windows are about one and a half to twice the width of the relatively opaque frames.

3. A fountain pen having a barrel substantially as described and as shown in figure 1 or 2 of the accompanying drawing.

Dated this 16th day of May, 1938.

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

Fig. 1.

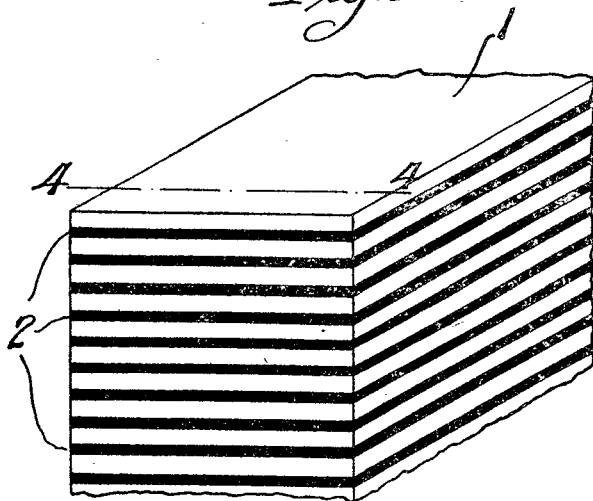


Fig. 2.

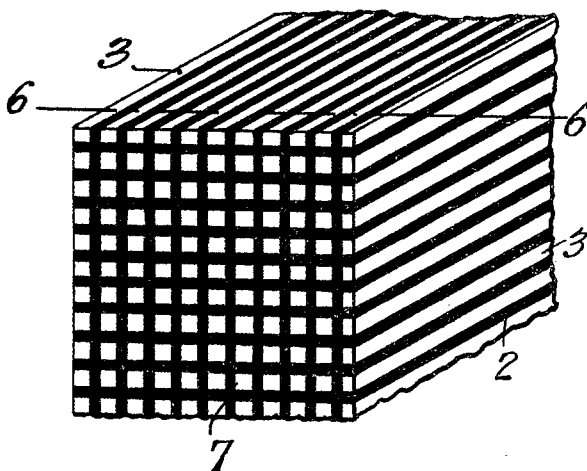


Fig. 3.



Fig. 4.

