

1.150.333



PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in and relating to Ball-Point Pens

We, CONWAY STEWART & CO. LIMITED, a British Company of 196 Great Cambridge Road, Enfield Middlesex, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to ball-point pens and has for its object to provide an improved means for fitting to the barrel of the pen a nose portion through which the writing point of the ink re-fill projects.

According to the invention the nose portion consists of a tapered or generally frusto conical hollow member and said nose portion and said barrel are provided with means enabling said nose portion to be securely attached to said barrel by snap action.

According to another aspect of the invention the nose portion comprises a thin walled tapered or generally frusto conical member provided at its base or wider end with an inwardly tapering annular skirt portion and the barrel is provided in its outer surface with an annular under cut groove into which the inwardly tapering skirt of the nose portion engages by snap action.

In order that the invention may be more clearly understood one particular embodiment thereof will now be described, by way of example, with reference to the accompanying drawing which shows the front or point end of a ball point pen in longitudinal cross-section.

Referring to this drawing the pen according to the invention comprises a barrel portion 1, a nose portion 2 and an ink re-fill 3. The nose portion 2 is adapted to be fitted to the front end of the barrel 1 by snap-action and consists of a relatively thin-walled tapered or generally frusto-conical member, composed of a suitably resilient material such as thin sheet metal or a synthetic plastics material, and provided at its base or wider end with an inwardly tapering

annular skirt portion 2a which engages in an annular undercut groove 4 formed in the external wall of the barrel 1, one wall of said groove having a similar angle of taper to that of the tapered skirt portion 2a of the nose 2. The nose portion 2 is fitted onto the barrel 1 by pressing it onto the front or forward end of the barrel until the annular tapered skirt portion 2a snaps into the annular groove 4 in the barrel.

It is to be understood that the invention is not limited to the particular embodiment described but can be modified in various ways without departing from the scope of the invention as defined in the appended claims. For example instead of providing the nose with a continuous skirt portion 2a it could be provided with a discontinuous skirt portion in the form of a plurality of circumferentially spaced lugs which engage in a plurality of corresponding recesses formed in the outer surface of the barrel.

The form of the nose portion on known constructions of ball-point pens is normally provided with a shank portion which is pushed into the forward or front end of the barrel and fixed in position either by rivetting, spinning or punching. The nose portion 2 of the present invention eliminates the need for rivetting, spinning or punching and thus reduces the cost of manufacture and facilitates assembly.

WHAT WE CLAIM IS:—

1. A ball point pen comprising a barrel for receiving an ink re-fill or cartridge and having fitted thereon a nose portion through which the point of the re-fill or cartridge projects, wherein said nose portion consists of a tapered or generally frusto conical hollow member and said nose portion and said barrel are provided with means enabling said nose portion to be securely attached to said barrel by snap action.

2. A ball point pen comprising a barrel for receiving an ink re-fill and a nose portion,

[Price 4s. 6d.]

- through which the point of the re-fill projects, fitted thereon, wherein said nose portion comprises a thin walled tapered or generally frusto conical member provided at its base or wider end with an inwardly tapering annular skirt portion and the barrel is provided in its outer surface with an annular under cut groove into which the inwardly tapering skirt of the nose portion engages by snap action.
- 5
- 10 3. A ball point pen according to claim 1, wherein said nose portion is provided around its base or wider end with a plurality of circumferentially spaced inwardly tapering lugs and the barrel is provided in its outer surface with a plurality of circumferentially spaced recesses into which the lugs of the nose portion engage.
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4. A ball point pen according to any one of the preceding claims wherein the nose portion is composed of resilient thin sheet metal. 20
5. A ball point pen according to any one of claims 1 to 3, wherein the nose portion is composed of a synthetic plastics material.
6. A ball point pen having a nose portion substantially as herein described with reference 25 to the accompanying drawings.

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1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

