110,270

PATENT SPECIFICATION

Application Date, Feb. 6, 1917. No. 1785/17.
Complete Left, Aug. 7, 1917.
Complete Accepted, Oct. 18, 1917.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Fountain and Stylographic Pens.

I, WILLIAM LIVSEY, of 11, Groveland Road, Wallasey, in the County of Chester, Engineer, do hereby declare the nature of this invention to be as follows:—

This invention relates to fountain and stylographic pens of the "safety" type, that is, of the kind wherein the pen nib or stylus, as the case may be, is connected with a feed-bar or stem longitudinally arranged within the pen body or barrel, which nib or stylus is projected from or withdrawn into the barrel on the actuation of a rotary head-piece arranged on the barrel top through the engagement of a lateral pin provided on said bar or stem in a helical slot formed in a surrounding tubular element which is revolved, to effect the reciprocation of said feed-bar or stem, through its connection with said rotatable head-piece.

The object of the present invention is to prevent the shearing off of said rotary head-piece and/or fracture of the parts connected therewith or operated thereby.

Broadly, my invention consists in the provision around a head-piece of a ring, band, or collar, constructed, say, of vulcanite, in which is formed a slit or saw-cut, so that on the application of the pen cap to the collar the latter is closed on to and grips the head-piece, which is thereby turned when said cap is revolved.

According to one and a preferred mode of embodying my invention, said head-piece forms an extension of a stem or rod to which the helically slotted tube hereinbefore referred to is secured, and from the top or upper face tapers inwardly, that is, it is in the form of a truncated cone. The collar, which is slit or saw-cut from the lower edge is bored to fit in a revoluble manner around said head piece; the upper portion of said collar tapers outwardly from the top and the lower portion is reduced in diameter, the shoulder so formed being adapted to abut against the upper section of the pen body or barrel.

When the open end of the pen cap, which is of appropriate shape or configuration, is pushed on to the upper tapering portion of said collar it causes same to close and through the consequent friction between the cap and collar and collar and head-piece said head-piece is turned when the cap is revolved to cause the projection or retraction of the pen nib, as desired.

Dated this 2nd day of February, 1917.

JOHN HINDLEY WALKER,
139, Dale Street, Liverpool,
Agent for the Applicant.

[*Price 6d.*]

COMPLETE SPECIFICATION.

Improvements in or relating to Fountain and Stylographic Pens.

I, WILLIAM LIVSEY, of 11, Groveland Road, Wallasey, in the County of Chester, Engineer, 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 fountain and stylographic pens of the "safety" type, that is, of the kind wherein the pen nib or stylus, as the case may be, is connected with a feed-bar or stem longitudinally arranged within the pen body or barrel, which nib or stylus is projected from or withdrawn into the barrel on the actuation of a rotary head-piece arranged on the barrel top usually through the engagement of a lateral pin provided on said bar or stem in a helical slot formed in a surrounding tubular element which is revolved, to effect the reciprocation of said feed-bar, by reason of its connection through a rod or stem with said rotatable head-piece, and the object of my invention is to provide improved means for revolving said rod or stem in order to minimise the likelihood of fracture thereof or of parts connected therewith or operated thereby.

Broadly, my invention consists in the provision around a head piece and/or said rod or stem of a ring, band, or collar, constructed of vulcanite, or other suitable material, which is normally revoluble about said head-piece and/or rod or stem and wherein is or are formed a slit or slits or saw-cuts so that on the application of a pen cap or closure—the lower interior end whereof is of appropriate shape or configuration—to the collar the latter is squeezed or closed on to and grips the rod or stem or/and head-piece, which is or are thereby turned when said cap is revolved.

According to one—a preferred—mode of embodying my invention, there is formed on the upper end of said rod or stem, to which the helically slotted tube hereinbefore referred to is secured, a flange or head-piece. The collar, which is slit or saw-cut from the lower edge, is bored to fit in a revoluble manner around said rod or stem and head-piece; the upper portion of said collar tapers or is coned outwardly from the top and the lower portion is reduced in diameter, being adapted to fit within and also make joint with the upper adjacent section of the pen body or barrel.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings, wherein:—

Fig. 1 is a longitudinal section of a "safety" reservoir pen embodying my improvements.

Fig. 2 being an elevation of said collar and rod or stem.

Figs. 3 and 4 illustrate slightly modified constructions of the lower portion of said collar.

In the several views like characters of reference denote like or equivalent parts wherever they occur.

a designates the pen body or barrel and *b* the upper section which is screwed into said barrel *a*. *c* is the helical slot formed in tube *d*, in which slot the lateral pin *e* (which projects into a longitudinal groove or recess formed in the barrel *a*) engages, said pin *e* being fitted to the feed-bar or stem *f* the end whereof carries the pen nib.

To the upper portion of said tube *d* is secured by means of pin *g* the lower end of the rod or stem *h* at the top whereof is formed the head piece or flange *i*.

Disposed around said head-piece *i* and the top part of said rod or stem *h* is a vulcanite collar *j* j^1 wherein is formed a saw-cut *k* extending upwardly from the bottom edge.

The upper portion *j* of said collar *j* j^1 tapers or is coned outwardly from the top face, and the interior wall of the lower part of the cap *l* is of corresponding

shape or configuration. The lower portion j^1 of said collar is reduced and enters the top of said section b the upper part b^1 whereof is so shaped as to make a good face-to-face-joint when the pen is assembled. m represents a joint-making sleeve of cork or the like.

In the modifications illustrated in Figs. 3 and 4, the collars have—as compared with the construction shown in Figs. 1 and 2—comparatively short shoulders j^1 and also parallel portions j^2.

When it is desired to project or retract the pen nib, the lower open end of the pen cap or closure l is pushed on to the upper tapered or conical portion j of said collar—see Fig. 1—causing same by reason of the provision of the saw-cut k to squeeze or close around the rod or stem h, and, through the consequent frictional grip between said cap and collar, and between said collar and rod or stem, the pen nib is reciprocated in well known manner when the cap is revolved.

It is to be understood that I do not desire to confine myself to the precise details of construction and arrangement of parts illustrated in the accompanying drawings, which are given by way of examples only, as various modifications may be made without departing from the spirit and scope of the invention. For instance, a split or saw-cut collar of appropriate construction may be adapted to grip a suitably shaped head-piece *per se* or in addition to the rod or stem.

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. In a fountain or stylographic pen of the "safety" type, the provision around a head-piece and/or a rod or stem—through the rotational movement whereof the pen nib or stylus is projected and retracted—of a ring, band, or collar constructed of vulcanite or other suitable material and in which there is or are formed a slit or slits or saw-cuts, so that when said collar is squeezed it will close around and grip said rod or stem and/or head-piece.

2. In combination with a fountain or stylographic pen embodying improvements specified in the preceding claim, a cap closure the interior whereof is of such shape or configuration that when pressed on to said ring, band, or collar, the latter, is caused to grip said rod or stem and/or head-piece, so that the pen nib is reciprocated through the rotational movement of said cap; substantially as described.

3. In a fountain or stylographic pen of the "safety" type, the provision around a head-piece and rod or stem—through the rotational movement whereof the pen nib or stylus is projected and retracted of a ring, band, or collar, constructed of vulcanite or other suitable material in which is or are formed a slit or slits or saw-cuts, the upper portion of said collar being tapered or coned and the lower portion reduced so that it enters and makes joint with the adjacent section of the pen barrel; and a cap closure the interior whereof is of such shape or configuration that when the cap is pressed onto said ring, band, or collar the latter is caused to grip said rod or stem, so that the pen nib may be reciprocated through the rotational movement of said cap; substantially described.

4. The complete reservoir pen constructed substantially as hereinbefore described, and illustrated in the drawing annexed hereto.

Dated this 4th day of August, 1917.

JOHN HINDLEY WALKER,
Agent for the Applicant,
139, Dale Street, Liverpool.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1917.

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

FIG. 1.

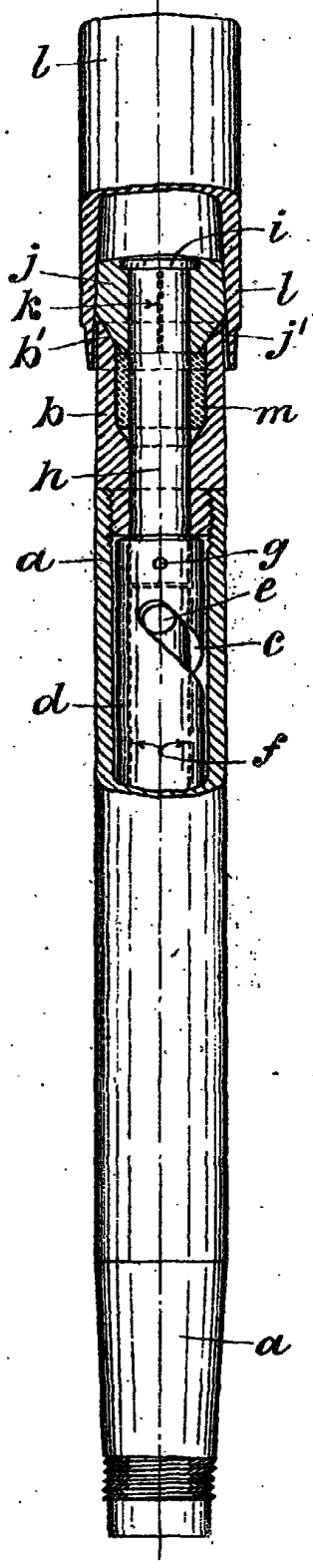

FIG. 2.

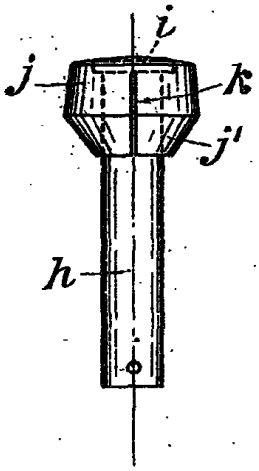

FIG. 3.

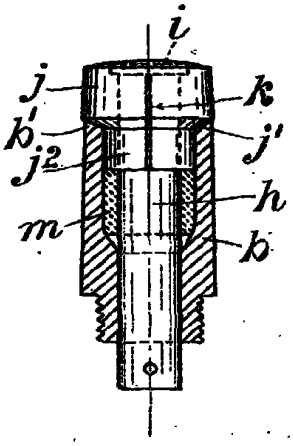

FIG. 4.