

PATENT SPECIFICATION



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396,879

Complete Left: April 24, 1933.

Complete Accepted: Aug. 17, 1933.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, ANDREW STUART HORN (British Nationality), of 60, Osmaston Road, Prenton, Birkenhead, in the County of Chester, do hereby declare the nature of this Invention to be as follows:—

This Invention relates to fountain or reservoir pens generally, but has more particular reference to fountain or reservoir pens of sac self-filling type provided with a nib-carrying section of push-in pattern.

In fountain or reservoir pens provided with a nib section of the aforesaid kind it is known that when materials such as casein, or the like, are employed in the construction of the body or barrel there is a tendency for the holding or gripping effect of the body or barrel on the push-in section to vary due to expansion and contraction of the body materials, with the result that the nib section is liable to displacement or even become detached from the pen body or barrel.

The object of my Invention is to so construct or arrange a nib section of push-in type or pattern that at all times it is positively locked or anchored in required position at the front end of the pen body or barrel and cannot become detached therefrom unless wilfully disconnected.

According to my Invention, I locally weaken that part—i.e. the intermediate part—of a push-in nib section which makes frictional contact or engagement with the inner wall or bore of the pen body or barrel by forming in the outer

surface or wall of said intermediate holding portion a series of circumferentially spaced grooves or recesses, or the like, which extend preferably longitudinally of the nib section from the customary flange or shoulder thereof which abuts against the front end of the pen body or barrel to the usual reduced end portion upon which the sac is held. The provision in said intermediate part of the nib section of the grooves, or the like, thus renders this part capable, to some extent, of inward and outward deflection, this slight resiliency or flexibility of the part being sufficient to compensate for any variations in the pen body or barrel due to expansion and contraction as it responds readily to any variations of the pen body or barrel, so that a positive holding effect of the nib section on the pen body is attained under all conditions of use.

Obviously the intermediate part of the nib section may be locally weakened in any convenient manner other than by longitudinally grooving same as just described in order to attain the end in view.

Dated this 21st day of April, 1932.

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and

125, High Holborn,
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Agent for the Applicant.

COMPLETE SPECIFICATION.

Improvements in or relating to Fountain or Reservoir Pens.

I, ANDREW STUART HORN (British Nationality), of 60, Osmaston Road, Prenton, Birkenhead, in the County of Chester, 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:—

In fountain or reservoir pens having bodies or barrels of materials such as

[Price 1/-]

casein, or the like, it is known that due to expansion and contraction of the body material complementary parts having screw or frictional connection with a body or barrel are liable to become loose or even completely separated from the body, and the object of my Invention is to obviate this disadvantage by the provision of new or improved means for compensating for such body variations whereby comple-

mental parts of a fountain or reservoir pen may at all times be held in required position upon a body or barrel despite the normal contraction and expansion of the body and this without necessity for the employment of special anchoring or fastening means such as retaining pins, spring rings, and the like.

Although the Invention may be applied in various directions in connection with fountain or reservoir pens, for example, in the detachable anchorage of a screw cap upon the rear end of a pen body or barrel, it is my intention to employ it more particularly in connection with the anchorage of the customary nib sections of push-in type or pattern, as by its application a nib section is positively locked in required position at the front end of the pen body or barrel and cannot become detached therefrom except by wilful disconnection.

Broadly my Invention resides in forming in a suitable part of a nib section, or other securing element which constitutes a means of anchoring the nib and feed bar or end cap to the casein or other suitably body or barrel of a reservoir pen, a series of external grooves or recesses which serve to locally weaken such part of the securing element, or alternatively provide teeth or corrugations, or the like, on the part of the element. When, therefore, the securing element is applied to a pen body or barrel, said weakened or corrugated part of the former elastically grips or "bites" into the inner wall or bore of the latter in such fashion as to positively retain an efficient hold upon the body or barrel at all times, and this irrespective of any normal contracting and expanding actions to which the body material may be subjected.

I will further describe my Invention with the aid of the accompanying sheet of explanatory drawings which illustrate, by way of examples only, two modes of carrying the same into effect.

In said drawings:—

Fig. 1 is the part sectional elevation, and Fig. 2 a transverse section, of the lower portion of a fountain or reservoir pen of sac self-filling type provided with a push-in nib section constructed in accordance with the Invention.

Fig. 3 is a part sectional elevation, and Fig. 4 a transverse section, of the upper or rear portion of a fountain pen provided with a cap-securing element according to the Invention.

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

Referring first and more particularly to the arrangement illustrated in Figs. 1

and 2, a generally designates the tubular body or barrel of the pen which is made from casein or like material, b is the nib section, c the feed bar and d the writing point or nib frictionally secured in the central passage or bore of the section, and e denotes the customary collapsible ink reservoir or sac attached in usual manner to a reduced end portion b^1 of the section.

The intermediate part b^2 of said nib section, which is arranged to make frictional contact or engagement with the inner wall or bore a^1 of the body or barrel a , is locally weakened by the formation in its outer surface or wall of a series of circumferentially spaced external grooves or recesses f which extend longitudinally of the nib section from the customary flange or shoulder b^3 thereof which abuts against the front or lower end of the pen body a to said reduced sac-securing portion b^1 . The provision in said intermediate part b^2 of the nib section of the grooves or recesses f thus renders this part capable, to some extent, of inward and outward deflection, and this resiliency or flexibility, though only slight, is sufficient to compensate for any variations which may occur in the pen body or barrel a due to normal expansion and contraction, and as the portion b^2 of the section responds readily to such variations of the pen body a positive holding effect of the nib section b on the body is attained under all normal conditions of use and the nib section may not be removed except by wilful separation from the pen body.

To attain the desired end said intermediate part b^2 of the nib and feed bar securing element b may obviously be locally weakened in any convenient manner other than by longitudinally grooving same as before described, or the grooving may be arranged in any other desired fashion.

The arrangement illustrated in Figs. 3 and 4 provides for the attachment of a screw end cap g to the rear end of the pen body or barrel by means of a securing element made in the form of a connecting piece of brass or other suitable material which incorporates a tubular portion h , a reduced externally threaded shank part h^1 for the engagement of the co-operating internally threaded part g^1 of the cap, and a shoulder h^2 constituting between the respective parts h , h^1 of said metallic securing element a seating for the adjacent end of the cap.

In order that the securing element may be positively anchored to the casein or the like body a in such fashion that there is no tendency for it to become loose or detached from the body due to normal expansion and contraction of the body

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material the portion h of the element is provided on its outer surface or wall with a series of longitudinally arranged teeth or corrugations h^3 created by the formation of circumferentially spaced grooves or recesses f^1 in said lower part of the element, and which teeth or corrugations "bite" into the inner wall or bore a^1 of the pen body or barrel a sufficiently to ensure a constant holding or gripping of the element within the rear end of the barrel under all normal conditions of use. Thus the end cap g may readily be applied to or detached from the pen body and when applied is, due to its screw connection with the threaded shank h^1 of the securing element, not subject to variations of the body material a , and therefore not liable to become detached from the body except by wilful separation from the metallic securing element.

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 or for use in a fountain or reservoir pen, a nib and feed bar or end cap securing element provided with a locally weakened or toothed or corrugated part which grips or bites into or is adapted to grip or bite into the inner wall or bore of the pen body or barrel and positively retain at all times an efficient hold upon the latter.

2. In or for use in a fountain or reservoir pen having a body or barrel made of casein or other similar material, a nib and feed bar or end cap securing element provided with a locally weakened or toothed or corrugated part which grips or bites into or is adapted to grip or bite into the inner wall or bore of the pen body or barrel and positively retain at all times an efficient hold upon the latter irrespective of the normal contracting and expanding actions of the body material.

3. In or for use in a fountain or reservoir pen having a body or barrel made of casein or other similar material, a nib and feed bar or end cap securing element provided in part with a series of external grooves or recesses which serve to locally weaken or create teeth or corru-

gations, or the like, on such part of the securing element, for the purpose specified. 55

4. In or for use in a fountain or reservoir pen having a body or barrel made of casein or similar material, a nib and feed bar securing element comprising a nib section having an end portion adapted to receive and hold the writing point or nib, a reduced end portion adapted for the attachment of the collapsible ink reservoir or sac, and an intermediate portion adapted to frictionally engage the inner wall or bore of the pen body or barrel and which intermediate portion is weakened by the formation of circumferentially spaced longitudinal grooves or recesses in its outer surface or wall, for the purpose specified. 60 65 70

5. In or for use in a fountain or reservoir pen having a body or barrel made of casein or similar material, an end cap securing element comprising a metallic piece having a tubular portion adapted to engage the inner wall or bore of the pen body or barrel, a reduced externally threaded shank for the engagement of an internally threaded end cap, and a shoulder constituting between said tubular portion and shank a seating for said cap, and said tubular portion being provided by formation of circumferentially spaced grooves or recesses in its outer surface or wall with a series of longitudinally arranged teeth or corrugations for the purpose specified. 75 80 85 90

6. A fountain or reservoir pen of sac self-filling type provided with a nib section substantially as hereinbefore described and illustrated in Figs. 1 and 2 of the accompanying drawings. 95

7. A fountain or reservoir pen of sac self-filling type provided with an end cap securing element substantially as hereinbefore described, and illustrated in Figs. 3 and 4 of the accompanying drawings. 100

Dated this 21st day of April, 1933.
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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

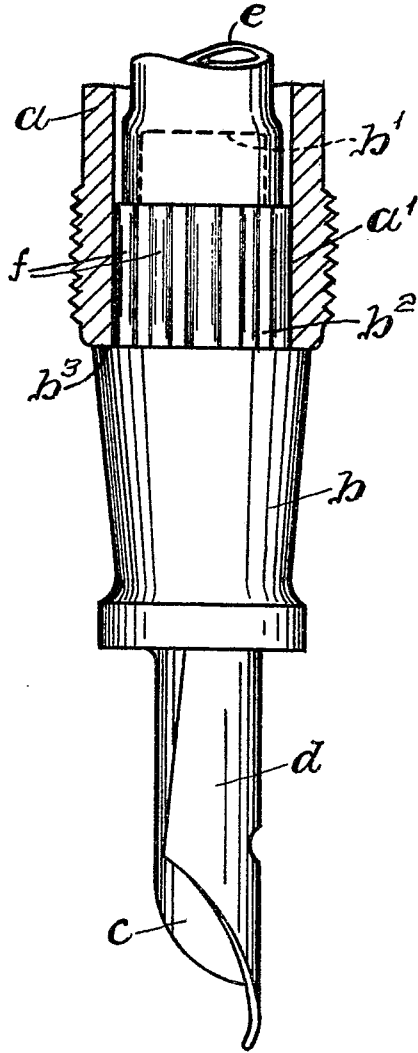


Fig. 3.

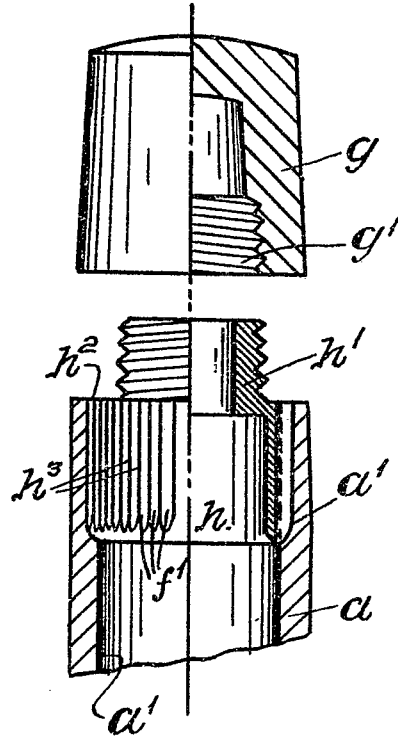


Fig. 2.

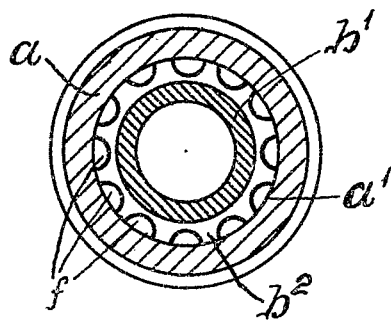


Fig. 4.

