

PATENT SPECIFICATION



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487,942

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PROVISIONAL SPECIFICATION

Improvements in or relating to Self-filling Fountain Pens

- We, MENTMORE MANUFACTURING Co. LIMITED, a Company registered under the laws of Great Britain, of Tudor Grove, Well Street, Hackney, London, E.9, and WILLIAM FREDERICK JOHNSON, a Subject of the King of Great Britain, of 13, Merrick Square, London, S.E.1, do hereby declare the nature of this invention to be as follows:—
- 10 This invention concerns improvements in or relating to self-filling fountain pens and particularly to pens of the type in which the barrel of the pen itself acts as the sole or principal ink-reservoir and
- 15 has a collapsible bag attached to the end remote from the feed-section and in which an air-tube extends longitudinally of the barrel and opens into the same adjacently to the feed-section.
- 20 According to the present invention, in a self-filling pen having a bag or sac located at the end of the barrel remote from the feed-section, particularly a pen of the type set forth above, the end of the bag or sac is surmounted by a stiff hollow thimble or ferrule which is guided in the end-part of the barrel or an extension thereof and normally projects from the end of the said end-part or extension.
- 30 Preferably the said thimble or ferrule encloses the closed end of the bag or sac. With the arrangement according to the invention, the pen can be simply filled by alternately depressing and releasing
- 35 the thimble or ferrule. Depression of the thimble or ferrule collapses the bag or sac and release thereof permits the said bag or sac to re-dilate.
- 40 The invention is applicable with particular advantage and simplicity to pens of the kind set forth in the specification of Patent No. 439,182. One form of such application will now be described by way of example:—
- 45 In this example, the air-tube and rubber bag are constructed and arranged in relation to a transparent or translucent barrel in substantially the fashion described in the aforesaid specification.

The cover-piece screwed on the end of the barrel proper and surrounding the bag is, however, abbreviated so that the free closed end of the bag projects from the open end of the cover-piece. Approximately $\frac{1}{4}$ — $\frac{1}{5}$ of the length of the bag may so project. The end-part of the bag is surmounted by a closely fitting thin metal thimble or ferrule which may partly or wholly cover the closed extremity of the bag or may alternatively be secured to the end part of the bag without covering its extremity. The thimble or ferrule is made of such length, for instance about $\frac{1}{2}$ of the length of the bag, as to extend into the open end of the cover-piece in which it is slidably guided. The actual guidance may be provided by a short metal sleeve secured in the open end of the cover-piece. This sleeve may project slightly from the cover-piece and the projecting portion may bear an external thread upon which a cap may be screwed for normally enclosing and protecting the thimble or ferrule against accidental depression. To fill the pen, it is only necessary to unscrew the cap and to depress and release the thimble or ferrule a few times.

If desired, spring-means may be provided to assist in maintaining the thimble or ferrule in its projecting position, but this will generally be unnecessary.

As will be seen, the arrangement for collapsing the bag is of a simple and inexpensive nature and there is nothing in it which can easily get out of order. Furthermore, the said arrangement avoids the necessity for adding to the length of the pen by the employment of parts projecting materially beyond the end of the bag.

Dated this 28th day of December, 1936.

For the Applicants,
RAWORTH, MOSS & COOK,
75, Victoria Street, London, S.W.1,
Chartered Patent Agents.

COMPLETE SPECIFICATION

Improvements in or relating to Self-filling Fountain Pens

We, MENTMORE MANUFACTURING Co. LIMITED, a Company registered under the laws of Great Britain, of Tudor Grove, Well Street, Hackney, London, E.9, and
 5 WILLIAM FREDERICK JOHNSON, a Subject of the King of Great Britain, of 13, Merrick Square, London, S.E.1, do hereby declare the nature of this invention and in what manner the same is to be
 10 performed, to be particularly described and ascertained in and by the following statement:—

This invention concerns improvements in or relating to self-filling fountain pens and particularly to pens of the type in
 15 which the barrel of the pen itself acts as the sole or principal ink-reservoir and has a collapsible bag attached to the end remote from the feed-section and in
 20 which an air-tube extends longitudinally of the barrel towards the feed-section.

According to the present invention, in a self-filling pen having a bag or sac located at the end of the barrel remote
 25 from the feed-section, particularly a pen of the type set forth above, the closed hollow end portion of the bag or sac is received within a stiff hollow thimble or ferrule which is guided in the end-part
 30 of the barrel or an extension thereof and normally projects from the end of the said end-part or extension. Preferably the said thimble or ferrule completely encloses the end portion of the bag or
 35 sac.

With the arrangement according to the invention, the pen can be simply filled by alternately depressing and releasing the
 40 thimble or ferrule collapses the bag or sac to expel air therefrom and release of the bag or sac permits the same to redilate so that ink is drawn into the barrel in known manner.

The invention is applicable with particular advantage and simplicity to pens of the kind set forth in the specification of Patent No. 439,182. One form of such
 50 application will now be described by way of example and with reference to the accompanying drawing, in which:—

Fig. 1 shows the pen, partly in longitudinal section, with the bag in its normal, dilated, condition, and
 55 Fig. 2 shows the pen with the bag collapsed.

In this example, the air-tube 1 and rubber bag 2 are constructed and arranged in relation to a transparent or translucent barrel 3 in substantially the

fashion described in the aforesaid specification. The cover-piece or barrel-extension 4 screwed on the end of the barrel proper and surrounding the bag, is, however, abbreviated so that the free
 65 closed end of the bag projects from the open end of the said cover-piece. Approximately $\frac{1}{4}$ — $\frac{1}{5}$ of the length of the bag may so project. The hollow end-part of the bag is surmounted by a closely
 70 fitting thin metal thimble or ferrule 5 which, as illustrated, completely covers the closed extremity of the bag. Alternatively, the ferrule may be formed with an aperture in its outer end of a size such
 75 that the rounded extremity of the bag is only partly covered or may be formed as a sleeve and secured to the end part of the bag without covering its rounded
 80 extremity. The ferrule is made of such length, for instance about $\frac{1}{2}$ of the length of the bag, as to extend into the open end of the cover-piece 4 in which it is slidably
 85 guided. The actual guidance is preferably provided by a short externally threaded metal sleeve 6 screwed in the open end of the cover-piece 4. This sleeve projects slightly from the cover-piece and the
 90 projecting portion serves to receive a screw-cap 7 for normally enclosing and protecting the ferrule against accidental depression (Fig. 1). A small flange 8 at the lower end of the ferrule limits upward
 95 movement thereof by abutting against the lower edge of the sleeve 6 when the bag is in the dilated condition (Fig. 1). To fill the pen, it is only necessary to unscrew the cap 7 and to
 100 depress and release the ferrule a few times. Fig. 2 shows the ferrule depressed and the bag collapsed.

A small air-vent or vents is or are provided in the wall of the cover-piece 4 or the thimble or ferrule is made a
 105 sufficiently loose fit in the sleeve 6 to allow air to flow past it when the bag is collapsed and dilated.

As will be seen the arrangement for collapsing the bag is of a simple and
 110 inexpensive nature and there is nothing in it which can easily get out of order. Furthermore, the said arrangement avoids the necessity for adding to the length of the pen by the employment of
 115 parts projecting materially beyond the end of the bag.

If desired, spring-means may be provided to assist in maintaining the
 120 thimble or ferrule in its projecting position, but this will generally be un-

necessary.

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 self-filling fountain pen having a bag or sac located at the end of the barrel remote from the feed-section, wherein the closed hollow end portion of the bag or sac is received within a stiff hollow thimble or ferrule which is slidably guided in the end-part of the barrel or an extension thereof and normally projects from the open end of the said end-part or extension.

2. In a self-filling fountain pen in which the barrel of the pen itself acts as the sole or principal ink reservoir and has a collapsible bag or sac attached to the end remote from the feed-section and an air tube extends longitudinally of the barrel towards the feed section, the provision of a stiff hollow thimble or ferrule which receives within it the closed hollow end portion of the bag or sac, is slidably guided in the end-part of the barrel or an

extension thereof and normally projects from the open end of the said end-part or extension.

3. A pen in accordance with claim 1 or 2, wherein the thimble or ferrule completely encloses the end portion of the bag or sac.

4. A pen in accordance with claim 1, 2 or 3, wherein the thimble or ferrule is guided in a sleeve secured in the end of the barrel or extension thereof and serving, if required, for the attachment of a cap.

5. A pen in accordance with claim 4, wherein the thimble or ferrule has a stop-flange at its lower end engageable with the lower edge of the sleeve when the bag or sac is in the dilated condition.

6. The self-filling fountain pen substantially as described with reference to the accompanying drawing.

Dated this 30th day of November, 1937.

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

