

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION.

Improvements in Fountain or Reservoir Pens.

We, CONWAY STEWART AND COMPANY, LIMITED, a British company, of 75, Shoe Lane, London, E.C. 4, and GEORGE FRANK SMITH, a British subject, of 322, Old Ford Road, London, E. 3, do hereby declare the nature of this invention to be as follows:—

This invention relates to fountain pens of the kind known as self-filling, and has for its object to provide simplified and efficient mechanism for filling the reservoir of the pen with ink.

The pen is of the kind in which the reservoir is an elastic tube provided with lever mechanism for pressing a plate against the elastic tube to expel the air, so that after the point of the pen has been inserted in the ink the return of the lever to its original position will allow the tube to expand and draw in a supply of ink.

According to the present invention the slot lining plates or frames as used heretofore for carrying the pivot pin of the lever for pressing the plate against the elastic tube are dispensed with, the lever being pivoted directly in or on the inner side of the lever slot in the barrel of the pen and engages at its inner end the tube pressing plate directly at a position where it will move the plate throughout its length against the elastic tube both

ends of the tube pressing plate being free to move to the same extent to and from the elastic tube. The pivot pin may consist of a bent piece of wire sprung into a transverse recess in the bore of the barrel and threaded through a hole, or holes when the lever is of U-shaped section, forming the fulcrum of the lever.

In order to ensure the positive return of the plate by the lever, the inner end of the lever is provided with pins or lateral extensions sliding in retaining guide-ways provided on the tube pressing plate. These guide-ways may be constructed by bending over opposite portions of the edges of the tube pressing plate.

The lever is also provided with means for holding it in the closed position in the slot in the barrel or casing of the pen, such means consisting of lateral springs or projections near the end of the lever, adapted to spring under the edges of a channel-like member secured in the lever slot of the barrel, and to yield and liberate the lever when its outer end is lifted.

Dated this 22nd day of October, 1924.
A. A. THORNTON,
Chartered Patent Agent,
Quality Court, Chancery Lane, W.C. 2,
For the Applicants.

COMPLETE SPECIFICATION.

Improvements in Fountain or Reservoir Pens.

We, CONWAY STEWART AND COMPANY, LIMITED, a British company, of 75, Shoe Lane, London, E.C. 4, and GEORGE FRANK SMITH, a British subject, of 322, Old Ford Road, London, E. 3, 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 pens

[Price 1/-]

of the kind known as self-filling, and has for its object to provide simplified and efficient mechanism for completely filling the reservoir of the pen with ink.

The present invention comprises an improvement of a reservoir pen of the kind having a flexible ink reservoir engaged by a plate provided with an operating lever pivoted to the barrel of the pen and having its end extending through a slot in the barrel so that it can

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be lifted to press the plate against the reservoir and expel the air therefrom, and be lowered again to allow the reservoir to expand and draw in a supply of ink after the nib end of the pen has been inserted in a supply of ink.

Heretofore in pens of this type having barrels consisting of thin metal tubes, it has been proposed to construct the pivot pin of a divided spring ring extending round the inside of the barrel and passing through the flanges of a filling lever of channel section, and to flatten the ends of the ring engaging the walls of the barrel, and also to provide on the inner ends of the lever lateral projections extending under inwardly turned edges provided on the flanges of a channel shaped presser plate engaging the flexible ink bag or reservoir. It has also been proposed heretofore to provide the flanges of the filling lever with projections adapted to spring under projections formed by turned in portions of the edges of the lever slot in the barrel to form a fastening for holding the lever in the closed position. In a further modification of this type of pen it has been proposed heretofore to provide a spring on the presser plate and attach the same to a plate having securing members engaging the walls of the barrel, and a slot through which the operating lever extends, the ring pivot pin extending through the lever being located in an annular groove formed in the barrel.

The present invention comprises a reservoir pen of the kind specified and having an operating lever mounted on a spring ring pivot fitting in an annular groove in the barrel, wherein the operating lever is held in place solely by such spring ring and is provided with a stop for holding it in the closed position consisting of a U-shaped member fitting in the slot in the barrel and adapted to grip the sides of the operating lever.

An embodiment of the invention is illustrated by the accompanying drawings wherein Fig. 1 is a longitudinal sectional view of a sufficient portion of the pen to illustrate the present invention, Fig. 2 is a transverse sectional view of Fig. 1, and Fig. 3 is a perspective view on an enlarged scale of the operating lever and its retaining ring.

In these drawings 2 is the barrel of the pen, 3 the elastic tubular reservoir fitting in the barrel 2, 4 the reservoir compressing plate bearing against and extending down one side of the reservoir, 5 the filling lever and 10 the slot in the barrel 2 into which it extends.

The filling lever 5 is provided with a pivot in the form of a spring ring 6 which passes through its fulcrum and is of such a size that it can be sprung into a circular groove 7 in the inner wall of the barrel 2.

The lever 5 is of channel-shaped section and the split ring 6 is passed through holes drilled through the two sides of the lever at its fulcrum.

The reservoir pressing plate 4 is channel-shaped and the inner or shorter end of the lever 5 extends into the channel so that it can engage the web or bottom of the channel. The sides or flanges of the channel plate 4 are provided with inwardly bent portions 8, 8 which extend over lateral projections 9, 9 provided on the end of the lever. By means of these lateral projections 9, 9 the lever 5 during its closing movement moves the plate 4 against the sides of the barrel 2.

The slot 10 in the barrel 2 is provided with a stop 11 to limit the inward movement of the lever 5 and also for the purpose of holding it in the closed position.

In the construction shown, the stop 11 is a U-shaped member of which the sides 12, 12 grip the compressible spring-like sides of the outer or operating end of the lever 5, these sides being also provided with holes 14 adapted to engage projections 15 extending from the inner sides of the U-shaped stop 11.

The extreme end of the lever 5 is provided with a lifting piece 13 to enable the lever to be lifted in the usual manner.

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 reservoir pen of the kind specified and having an operating lever mounted on a spring ring pivot fitting in an annular groove in the barrel, wherein the operating lever is held in place solely by such spring ring and is provided with a stop for holding it in the closed position consisting of a U-shaped member fitting in the slot in the barrel and adapted to grip the sides of the operating lever.

2. A reservoir pen having parts constructed, arranged and adapted to operate substantially as described with reference to the accompanying drawings.

Dated this 19th day of January, 1925.

A. A. THORNTON,
Chartered Patent Agent,
Quality Court, Chancery Lane, W.C. 2,
For the Applicants.

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

