

ORIGINAL COPY

# PATENT SPECIFICATION



Application Date: June 1, 1922. No. 15,373 / 22. **202,093**

Complete Left: March 1, 1923.

Complete Accepted: Aug. 16, 1923.

## PROVISIONAL SPECIFICATION.

### Improvements in or relating to Fountain or Reservoir Pens.

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

This invention relates to "safety" fountain or reservoir pens, that is pens of the type in which the writing nib, when not required for use, is housed within the pen body or barrel, and is projected into writing position or retracted through the rotary motion of an external head-piece, or the like: and has more particular reference to pens of the kind in which—in order to protect the interior working parts against undue stresses or strains—means are provided whereby the rotary head-piece, or the like, is permitted to "give" or slip on the nib reaching an extreme limit of travel either through propulsion or retraction.

Broadly, the present invention consists in forming a head-piece, or the like, in two parts which are normally operatively connected together by means of clutch elements respectively carried by the head-piece components and maintained in engagement with each other by resilient or spring means, the arrangement being such and the clutch so constructed that when the nib has completed a stroke in one direction, one of the head-piece components over which a cap, which is grasped by the user, is fitted with its clutch element, revolve independently of the other component and its clutch element, and at the same time audible notification may be given, say, through the movement of one clutch element upon or about the other.

In the following description of a safety fountain or reservoir pen is included one mode of carrying my invention into effect.

There is provided a rod or stem one end whereof is secured, as by pinning,

[Price 1/-]

to a helically slotted sleeve—through the rotation whereof a nib-carrying rod or bar is actuated in well known manner—whilst the other end of the stem is secured to the outer member of a two-part head-piece. Within said member there is formed a recess or cavity where-in is fitted and secured a clutch component comprising a metal ring on the face of which are formed shallow radial teeth or serrations.

Adjacent to said head-piece member there is revolubly disposed on the rod or stem a second clutch member which is in the form of a collar of larger diameter than said first mentioned clutch member and has a recess in which is disposed a second clutch ring element which is permitted longitudinal but not rotational displacement by the provision of diametral pins thereon, one end of each of which pins being secured to the clutch element whilst the other end extends through corresponding apertures in a flange provided in the collar. Between said flange and the adjacent face of said clutch element a ring or washer of india-rubber is provided.

Disposed on said stem adjacent to the clutch collar is a gland or plug the inner end of which is adapted to be secured to the body or barrel of the pen, and which gland or plug abuts against said collar and tends to maintain the component parts of the head-piece together, whilst said india-rubber ring or washer tends to maintain the clutch elements in engagement.

To project or retract the nib of the pen, the user grasps a cap (which, when the pen is in use, covers the nib) fitted on the head-piece and turns same, when, due to the engagement of said clutch elements of the head-piece the latter turns as a whole, and when the pen nib has reached the extreme limit of travel further effort to turn it will result in the

collar clutch member freeing itself against the resistance of said spring ring or washer and it will turn idly or independently on its stem, and at the same time the grating noise produced by the relative rotary motion between the clutch teeth will notify the user that the nib is fully projected or retracted.

In a modified construction said spring-

controlled clutch element may be located in the outer member of the head-piece, or said collar-like head-piece member may be arranged at the extreme end of said rod or stem which carries it.

Dated this 29th day of May, 1922.

JOHN HINDLEY WALKER,  
139, Dale Street, Liverpool,  
Registered Patent Agent.

## COMPLETE SPECIFICATION.

### Improvements in or relating to Fountain or Reservoir Pens.

I, WILLIAM LIVSEY, a British subject, of 11, Groveland Road, Wallasey, 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:—

This invention relates to "safety" fountain or reservoir pens, that is pens of the type in which the writing nib, when not required for use, is housed within the pen body or barrel, and is projected into writing position or retracted through the rotary motion of an external head-piece, or the like: and has more particular reference to the pens of the kind in which—in order to protect the interior working parts against undue stresses or strains—means are provided whereby the rotary head-piece, or the like, is permitted to "give" or slip on the nib reaching an extreme limit of travel either through propulsion or retraction.

Broadly, the present invention consists in forming a head-piece, or the like, in two parts which are normally operatively connected together through clutch elements maintained in engagement with each other by resilient or spring means, the arrangement being such and the clutch being so constructed that when the writing nib has completed a stroke in one direction or the other, one of the head-piece components will revolve independently of the other component, and at the same time audible notification may be given, say, through the movement of one clutch element upon or about the other clutch element.

I will further describe my invention with the aid of the accompanying sheet of explanatory drawings which illustrates, by way of example only, one mode of carrying the invention into effect.

In said drawings:—

Fig. 1 is a longitudinal section, drawn to an enlarged scale, of a "safety" fountain or reservoir pen in which my

improvements are embodied, Fig. 2 being the pen cap.

Figs. 3 and 4 are elevations, drawn at right angles to each other, and Fig. 5 is a plan, of one of the clutch elements drawn to an enlarged scale as compared with Figs. 1 and 2.

*a* indicates the pen body or barrel and *b* a rod or stem where to the nib *c* is connected. The inner or upper end of said rod or stem *b* is provided with a lateral pin *d* which extends through the helical slot *e*<sup>1</sup> of a sleeve *e* and enters the longitudinal slot *f*<sup>1</sup> of the section *f* where to the barrel *a* is screwed, so that by rotation of said sleeve *e* the writing nib may be projected or retracted, in well known manner.

Integral with said sleeve *e* is a rod or stem *g* the outer end whereof is secured by means of a pin *h* to the recessed member or component *j* of a two-part head-piece *j*, *j*<sup>1</sup>.

Within said body or section *f* there is formed a cavity *k* wherein is disposed a helically coiled wire spring *l* and a washer *m*, and disposed between said washer *m* and pin *h* is a rectangular tubular clutch element *n*, the upper or outer end *n*<sup>1</sup> whereof is of undulating or toothed shape or configuration and is maintained in contact with the pin *h* which constitutes a second clutch element by means of said spring *l*. Said head-piece member *j*<sup>1</sup> which is non-rotatably mounted on the member *n*, is in the form of a collar and is of larger diameter than the member *j*.

To project or retract the nib *c*, the user will place the cap *o* (which, when the pen is not in use, covers the nib) on the head-piece and turn the cap, when, due to the frictional engagement of the inner wall of the latter with the head-piece member *j*<sup>1</sup> and the connection of the latter with the head-piece member *j* through the clutch *n*, *h*, the nib will be actuated as desired, but when the nib has reached its extreme limit of travel

further turning of the head-piece member  $j^1$ , and with it the clutch member  $n$  will result in the latter freeing itself from the now stationary clutch pin  $h$  against the resistance of the spring  $l$ , so that the head member  $j^1$  will revolve idly; at the same time the noise produced through the movement of the clutch teeth  $n^1$  in contact with the clutch pin  $h$  will notify the user that the nib is fully projected or retracted, as the case may be.

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. A fountain or reservoir pen of the "safety" type which is characterized in that the head-piece, or the like, is formed in two parts which are normally

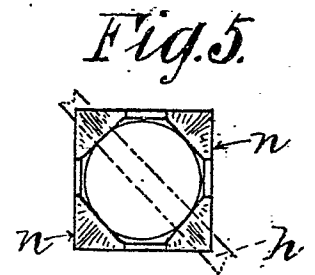
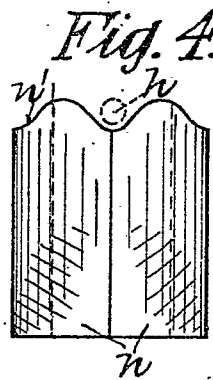
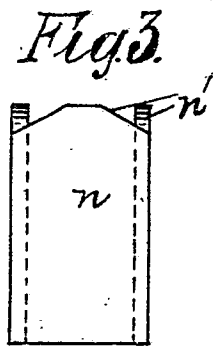
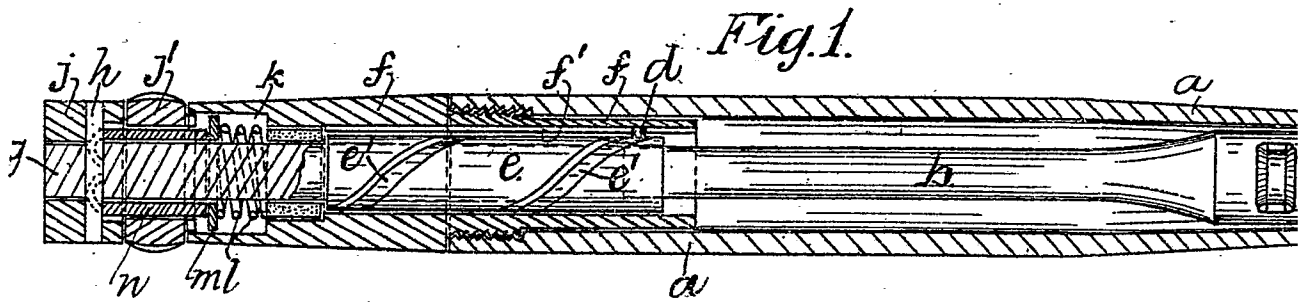
operatively connected together through clutch elements maintained in engagement with each other by resilient or spring means, the arrangement being such and the clutch being so constructed that when the writing nib has completed a stroke in one direction, or the other, one of the head-piece members or components will revolve independently of the other member or component, and at the same time audible notification may be given, say, through the movement of one clutch element upon or about the other clutch element.

2. A fountain or reservoir pen substantially as hereinbefore described and illustrated in the drawing annexed hereto.

Dated this 28th day of February, 1923.

JOHN HINDLEY WALKER,  
139, Dale Street, Liverpool,  
Registered Patent Agent.

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



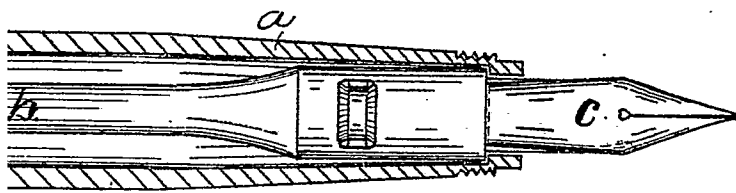


Fig. 2.

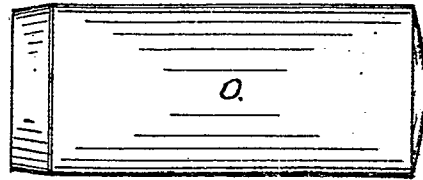
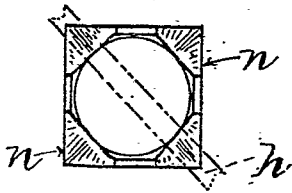


Fig. 5.



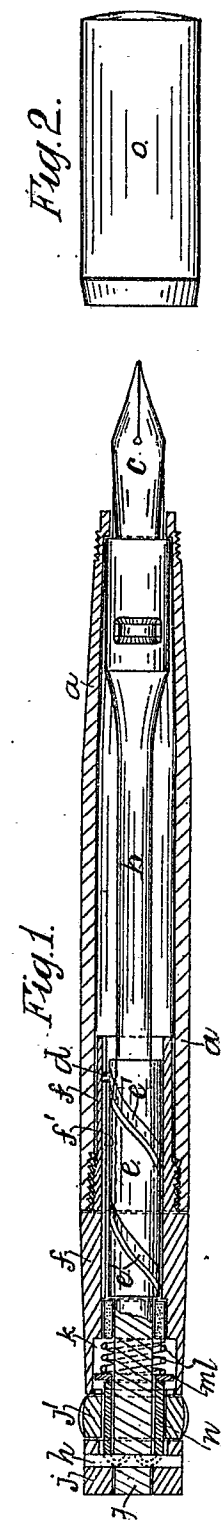


Fig. 1.

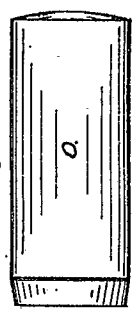


Fig. 2.

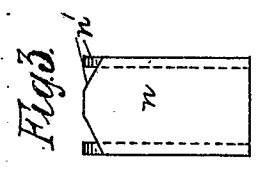


Fig. 3.

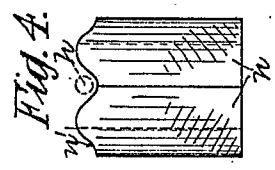


Fig. 4.

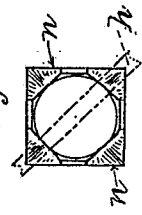


Fig. 5.

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