

PATENT SPECIFICATION



Application Date: Feb. 14, 1922. No. 4237/22.

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PROVISIONAL SPECIFICATION.

No. 4237, A.D. 1922.

Improvements in or relating to Fountain Pens.

I, LESLIE ROY WADE, of " Mayleigh ", Petersham, Surrey, a British subject, do hereby declare the nature of this invention to be as follows:—

5 A characteristic defect of the ordinary fountain pen lies with the fact that before use it is necessary to remove the cap from the top of the pen and either screw or push it on to the bottom of the barrel. 10 This operation takes time, and moreover the cap is liable to fall off and be lost or broken. Again the location of the empty cap at the end of the barrel, causes the pen as a whole, when in use, to be top 15 heavy, thereby losing the ideal balance; this is a matter of importance when writing over prolonged periods. These defects alone are largely prejudicial to the use of fountain pens to large numbers 20 of people.

I propose to remedy these defects, in addition to achieving certain other favourable results by providing instead of a cap which must be bodily removed 25 one which is capable of a combined sliding and turning movement about the top or nib end of the pen, and having to be bodily removed only when refilling the pen. When out of use, the nib is pro- 30 tected by the upper walls of the sliding cap; when it is desired to write, the cap is retracted so as to leave the nib exposed, by a simple and natural movement which can be effected by the fingers of the same 35 hand that holds the pen.

In order to carry my invention into effect I fix a pin or equivalent, approximately in the centre of the cap and projecting inwards so as to engage a longi-

tudinal slot cut in the upper part of the 40 barrel or section for the necessary length to admit of the required degree of freedom to the cap. This slot may, if desired, be provided with a metal lining. At the top end is a lateral recess; a 45 similar recess may be formed at the bottom.

The cap itself is closed at the outer end except for a diametrical aperture which is made of sufficient width to admit of the 50 easy passage of the nib and the lip of the feed, there-through when these are in proper alignment.

The pin and slot are so arranged that alignment is automatically secured by the 55 initial turn given to the cap before retracting. A suitable knurling may be formed on the outside of the cap so as to facilitate manipulation.

The cap itself is so tapered as to provide a comfortable and continuous out- 60 ward appearance presenting no awkward or unsightly break for the fingers when writing. The end nearest the nib may be suitably domed to give a comfortable grip 65 for the fingers.

I have found experimentally that the use of such a cap prevents the flooding by suction that often accompanies the 70 bodily removal of the usual type of cap. Moreover it provides an additional safeguard against inky fingers.

Moreover my invention greatly increases the ink capacity while still 75 retaining the length of the holder when writing at its normal length.

Dated the 11th day of February, 1922.

LESLIE ROY WADE.

PROVISIONAL SPECIFICATION.

No. 7395, A.D. 1922.

Improvements in or relating to Fountain Pens and the like.

I, LESLIE ROY WADE, Mayleigh, Petersham, Surrey, British subject, do hereby declare the nature of this invention to be as follows:—

5 My invention relates to fountain pens and the like of the kind described in my Patent Application No. 4237 dated 14th February 1922 in which provision is made for fitting to the pen a cap that is capable
10 of being moved longitudinally along the upper part of the pen-barrel, so that, in one position, the nib of the pen is exposed ready for use, whilst in another position the nib is protected by the cap, and is
15 ready for placing in the pocket.

Such construction presents many obvious features of advantage. No unnecessary time is lost by having to remove the cap bodily and replacing it at
20 the other end of the barrel before the pen is ready for writing. The cap, being normally connected to the pen, is not liable to be mislaid and lost; nor is it so liable to be broken or otherwise need
25 renewal. Moreover, it avoids the usual defect of flooding due to suction and the associated annoyance of inky fingers.

In the construction described in my former application, I have found in
30 practice that there is a tendency for the cap to slip down, accidentally, from the position in which it protects the nib to a position in which the nib becomes exposed.

35 In order to remove this defect I propose to employ the following improvement or modification of the original construction.

At the top end of the barrel I form an annular groove, in which I fit a split ring
40 of spring metal which is capable of being rotated within the groove with a certain degree of friction. The depth of this groove is sufficient to house the ring so that it does not project beyond the out-
45 side periphery of the barrel.

In the floor of the aforesaid groove I cut a narrow channel one end of which communicates with a longitudinal slot
50 leading to the top end of the barrel; and the other end, after almost completely encircling the groove, leads to another longitudinal slot extending downwards along the pen body for a suitable distance. The channel, as stated, does not
55 completely encircle the groove. The reason for this is in order that there shall

remain, within the original groove, a wall of material separating the two abutting ends of the channel, where these are continued upwards and downwards into the longitudinal slots referred to. 60

On the inside of the cap I arrange a pin which is adapted to engage with the channel and longitudinal slots previously mentioned. I may do this by firmly
65 securing a ring, fitted with the pin, within an annular slot formed inside the cap or by any other suitable means.

In operation the cap is placed on the pen so that the inside pin is in alignment with the upper longitudinal slot. This
70 in turn coincides with the space between the two ends of the split ring, so that the pin enters between these two ends, and passes into the narrow channel formed on the floor of the groove. Owing to the
75 wall left between the two ends of this groove the barrel can then only be turned in one direction, and this under some slight force due to the friction between
80 the ring and the groove. Once turned slightly out of alignment, the cap is firmly held in position so as to protect the nib, without any danger of being
85 inadvertently displaced so as to expose the nib.

In order to use the pen it is only necessary to rotate the cap until the pin comes against the opposite face of the wall. It is then in alignment with the
90 longitudinal slot leading downwards along the pen barrel, and can accordingly be moved downwards until the nib emerges through a suitable orifice formed at the top end of the cap. 95

This orifice may if necessary be fitted with a suitable cover.

By this construction once the cap has been initially fitted on the barrel it is practically impossible for it to be
100 inadvertently displaced so as to expose the nib when in the pocket. On the other hand when it is desired to use the nib, the wall constitutes a stop which automatically aligns the cap into the
105 correct position for this to be done. Finally when it is required to remove the cap bodily, for refilling or other purposes the correct position for doing this is similarly determined. 110

Dated the 11th day of March, 1922.

LESLIE ROY WADE.

COMPLETE SPECIFICATION.

Improvements in or relating to Fountain Pens and the like.

I, LESLIE ROY WADE, of 4, Duke Street, London, W.C. 2, formerly of Mayleigh, Petersham, Surrey, Merchant, a subject of the King of Great Britain, 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:—

10 This invention relates to fountain pens and similar writing implements such as stylo pens and pocket pencils, of the kind in which a longitudinally sliding sheath or cap more or less rotatable in relation to the body or barrel of the pen or pencil is connected with the said body by a bayonet slot attachment, whereby the said sheath can be drawn back to expose or pushed forward to cover the nib or writing point.

The principal object of the said invention is to produce an implement of the kind set forth in which the sheath is removable when required for filling purposes, although in ordinary use the sheath remains on the implement, this facility of removal also rendering the sheath interchangeable; subsidiary objects being to render the operations by which the writing point is exposed and covered easy of performance by one hand of the user; and to avoid heating or compression of air or condensation of moisture within the sheath when closed, and conversely the suction of ink which often accompanies the bodily removal of a sheath or cap of the usual type.

According to this invention a loose-fitting sheath of about half the length of the body of the implement and open at both ends is provided about the middle of its length with an internally projecting pin or other projection adapted to engage inner and outer partly circumferential grooves in the said body, which grooves communicate with longitudinal or perpendicular slots, and circumferential grooves may contain rotatable brake rings. Equivalently the projection might be on the barrel and the grooves in the sheath.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be described more fully with reference to the accompanying drawings illustrating an embodiment thereof in which:—

Figure 1 represents in elevation a fountain pen with the nib exposed,

Figure 2 represents the same pen with the nib covered. 60

Figure 3 is an elevation of the sheath detached.

Figure 4 is an elevation of the body of the pen without sheath. 65

Figure 5 is an elevation of the same taken at an angle of about 120° in relation to that in Figure 4.

Figure 6 is a diagram showing a linear development of the grooves on the body of the pen shown in Figures 4 and 5. 70

Figure 7 is a perspective view of one of the brake rings detached.

Figure 8 represents a detachable plug. 75

A indicates the body of the pen, B the nib, C the sheath. In the body A is formed a circumferential groove D, below which is a groove or channel E of increased depth and only partly circumferential, the unreduced part F of the body forming a stop or abutment between the two ends of the said channel. A lower circumferential groove G is adjacent to a similar partially circumferential groove or channel H, which is interrupted by a similar stop or abutment J which is downwardly directed. A brake ring K of spring metal is fitted into the groove D and has feet or projections L, M, divided by a slot N and overlapping the channel E. A similar metal brake ring P is fitted into the groove G and has projections Q, R overlapping the channel H and divided by a slot S. The ring K can be partly rotated to bring its slot N opposite a short slot or groove T in the body A. The channels E and H are joined by a vertical or other slot or groove U. A pin V in the sheath C is adapted to work in the grooves E, H, T and U. A short screw-threaded plug W can be secured in either of two internally screw-threaded parts formed respectively in the rear of the body A and in the tip or outer end of the sheath C, which latter if made of vulcanite or the like may be strengthened at its tip by a screw-threaded metal ferrule or liner; or a small detachable member of other suitable shape may be used instead of a screw-threaded plug. 80 85 90 95 100 105 110

In the writing position shown in Figure 1 the pin V in the sheath is assumed to be projecting through the slot S in the lower brake ring P into the channel H while the projection R on the said brake ring is against the stop J. The frictional resistance of the ring P 115

to rotation in the groove G causes the nib B to be steadily supported during writing.

To effect the change into the position shown in Figure 2, the sheath is turned to the left to bring the slot S into alignment with the slot or groove U; the sheath is then pushed forward so that the pin V travels up the groove U into the slot N in the upper brake ring K, through which the said pin passes into the channel E, and the sheath can then be turned slightly to the right to secure same, when the nib will be protected by the sheath and can be carried in the pocket in the usual manner, a spring clip of known or suitable type being if desired secured on the sheath to engage the edge of the pocket. If however the pen is to be carried in a wallet or handbag, the plug W can be taken from the rear of the pen body and screwed into the open top of the sheath to prevent the entrance of dust or other matters, or the shaking out of ink if the bag is swung or knocked.

The pen body which contains the ink reservoir may be provided with any known or suitable devices for enabling the reservoir to be replenished.

When it is desired to remove the sheath C from the pen, for filling or any other purpose, the sheath in the position shown in Figure 2 is turned further to the right until the projection M on the ring K comes against the other side of the stop F, when the slot N comes opposite the short slot T at the top of the body A, and the pin V, with a slight pressure on the sheath to overcome the resistance of the ring K, can be pushed out through the said slot T, setting free the sheath, which can be taken off the pen in a longitudinal direction. The ring K prevents the barrel from dropping out of the sheath when carried in the pocket.

The grooves or channels E and H may go nearly around the body of the pen as indicated, but it will be sufficient for the performance of their functions as described if they go about halfway round it. These grooves E and H as shown and described above are of greater depth than

the grooves D and G, but if the feet M and R are made with sharply inclined faces at the sides of the slots N and S respectively, to increase the resistance of the rings K and P to the passage of the pin V, the diameter of the body A at the partially circumferential groove E may be the same as at the circumferential groove D, that is to say, the groove E may be simply an extension of the groove D, and similarly the groove G may be widened but not deepened at the part H.

The end X of the body A is slightly reduced in diameter and in the writing position is covered by the sheath, which does not in any of the positions described touch this reduced part.

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 writing implement of the kind set forth in which a sheath of about half the length of the body of the implement and open at both ends is provided at about the middle of its length with an internal projection adapted to engage inner and outer partly circumferential grooves in the said body, which grooves communicate with longitudinal slots for enabling adjustment and removal of the said sheath to be effected.

2. A writing implement of the kind set forth, in which circumferential or partly circumferential grooves in the body of the implement are provided with spring brake rings, for the purposes specified.

3. A writing implement having its parts constructed and arranged substantially as described with reference to the accompanying drawings, for the purposes specified.

Dated this 4th day of November, 1922.

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

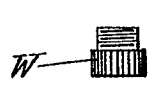
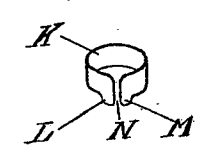
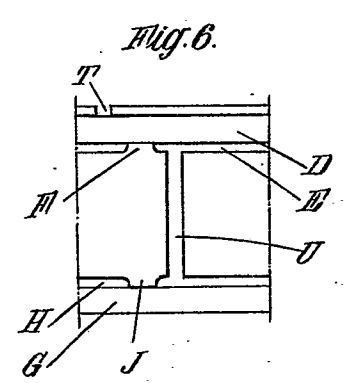
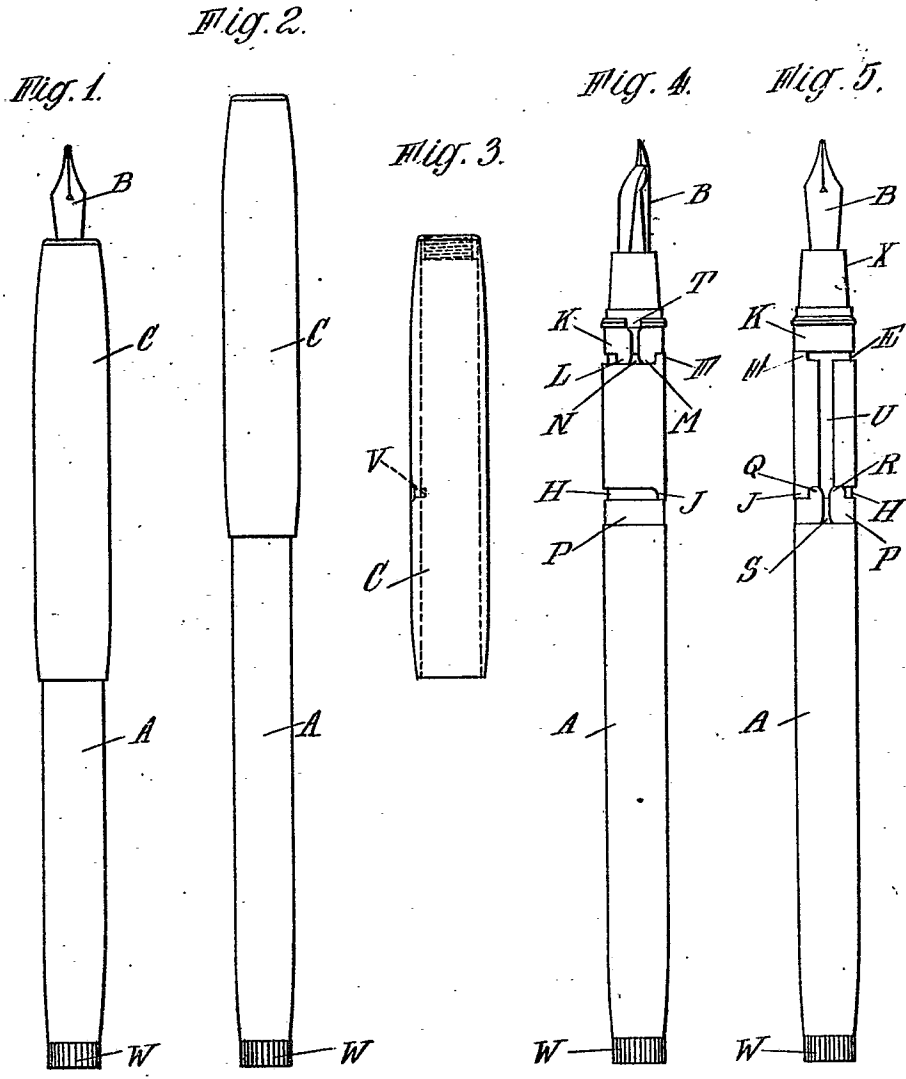


Fig. 7.

Fig. 8.