PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in Reservoir Pens.

I, THEODOR KOVACS, Hungarian subject, of 108, Lindenstrasse, Berlin, Germany, 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 reservoir pens of the kind having a nib secured in the hollow end of a holder by an under-feed bar which is inserted in the holder and secured to the nib at a point just in rear of the split portion of the nib. My invention is more particularly applicable to reservoir pens of the kind referred to above which have a feed-bar on the underside only of the nib.

The present invention is designed to provide an improved and readily interchangeable nib. Heretofore it has been usual, in pens of the kind above referred to, to provide the nib with a comparatively long shaft which is pushed some distance into the hollow end of the holder and clamped therein by the feed bar. In consequence thereof, it is sometimes very difficult to remove the nib.

The present invention enables the nib to be very easily fitted or removed so that the nibs can be interchanged repeatedly and without any trouble.

According to the present invention, a reservoir pen nib of the kind referred to is characterized by the provision of a very short shank which only slightly enters the hollow end of the holder and is pressed against the under-feed bar, being preferably gripped between the feed bar and the holder. The nib is preferably secured at its forward portion by hooks which are provided on the ink feeder. On removing the nib, the ink duct in the feed bar is left free for cleaning and can be readily and thoroughly cleansed. In order to prevent that part of the air channel and ink duct which is within the pen holder and inaccessible from being clogged with dried ink, the ink duct and air channel immediately behind the nib is enlarged, preferably by forming a reduced or cut-away portion on the feed bar.

The interchangeable nib makes a tight joint with the ink feeder and thus seals the ink duct at both sides thereof. Consequently, in the case of self-filling pens, it is only necessary to dip the point of the nib into the ink up to the opening at the end of the slit when filling the pen, whereas with existing self-filling pens, the pen must be dipped in to the ink right up to the mouth of the holder and afterwards dried.

Various constructional examples of the invention are illustrated by the accompanying drawings, the examples differing in the form of fastening for the forward portion of the nib.

Fig. 1 is a longitudinal section through the end of the holder with the ink feeder and nib. Fig. 2 is a section on the line 2—2 and Fig. 3 is a plan view.

A modification is shown in Fig. 4 in plan and in Fig. 5 in section on line 5—5 of Fig. 4.

A third construction is shown in Fig. 6 in side view, in Fig. 7 in section on line 7—7 of Fig. 6 and in Fig. 8 in plan.

In all the constructions, *k* is the end of the holder, *t* the ink feeder and *f* the nib. *h* is the usual air channel in the ink feeder, having narrow grooves for the ink flow.

In the construction shown in Figs. 1—3 the nib *f* has two elongated slots *o* behind the opening *l* at the end of the slit *p*. The ink feeder *t* has two pins *i* spaced the same distance apart as the slots *o* and hooked at their upper ends. The pins *i* pass through the longitudinal ribs *r* which form the channel *h* of the ink feeder.

To attach the nib, the slots *o* are brought over the hooked ends of the pins *i* and the nib is then pushed back until the

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tongue s at the rear end of the nib fits inside the end of the holder k. It is apparent from Fig. 2 that the nib f bearing on the ribs r completely seals the channel h at the sides. Immediately behind the nib f the ink feeder is cut-away to form an enlarged air channel and ink duct extending to the shoulder h^1. The corners v of the nib may be bent upwardly to form finger pieces and facilitate removal and insertion of the nib. The depression q rests in the air channel h and holds the nib in its proper position laterally.

The construction shown in Figs. 4 and 5 differs only from Figs. 1—3 in that it has a U-shaped stirrup b in place of the two pins i and the legs of the stirrup are let into the longitudinal ribs r of the ink feeder. The nib has longitudinal slots u and the portion between these slots is slit through at y to form a spring tongue w and a shorter tongue z. When the nib is pressed on to the ink feeder, the tongue w yields upwardly and on sliding back the nib the tongue z fits within the stirrup b.

In both the foregoing constructions the fastener is provided on the ink feeder. In the third example shown in Figs. 6—8, the fastener is of a known type carried by the nib f and consists of inwardly bent lugs x which are slid over correspondingly inclined faces on the longitudinal ribs r of the ink feeder. The rear end of the nib is secured in the manner shown in Figs. 1—3.

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 reservoir pen of the kind having a nib secured in the hollow end of a holder by an under-feed bar which is inserted in the holder and which is secured to the nib at a point just in rear of the split portion of the nib, characterized in that only a very short portion of the nib shank enters the holder and is pressed against the under-feed bar, substantially as and for the purpose set forth.

2. A reservoir pen as claimed in Claim 1 in which the feed bar carries fastening hooks projecting through slots in the nib, substantially as described.

3. A reservoir pen as claimed in Claim 2 in which the hooks project forwardly and through elongated slots in the nib, substantially as described.

4. A reservoir pen as claimed in Claim 1 in which the feed bar carries a stirrup and in which the nib is slit to provide a tongue engaging beneath the stirrup, substantially as described.

5. A reservoir pen as claimed in Claim 4 in which the nib has two parallel longitudinal slots u and a cross-slit y forming tongues w and z, the tongue w yielding when the nib is placed in position and the tongue z engaging beneath the stirrup b on sliding the nib towards the holder, substantially as described with reference to Figs. 4 and 5 of the accompanying drawings.

6. A reservoir pen according to any of the preceding claims in which the ink duct immediately behind the nib is enlarged by reducing or cutting-away part of the feed-bar behind the nib, substantially as described.

7. A reservoir pen according to any of the preceding claims in which the nib body f terminates in a small narrow tongue s instead of the usual shaft, substantially as described and illustrated.

8. A reservoir pin nib according to Claim 7 having side finger pieces r, substantially as described and illustrated.

9. A reservoir pen nib according to Claim 7 having a central depression q in the rear part of the nib for positioning the nib, substantially as described and illustrated.

10. The improved interchangeable-nib reservoir pen substantially as described with reference to Figs. 1—3, 4 and 5 or 6—8 of the accompanying drawings.

Dated this 2nd day of August, 1923.

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FIG. 1.

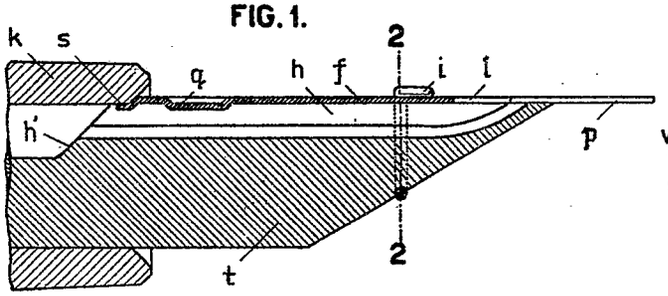


FIG. 2.

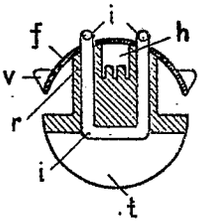


FIG. 3.

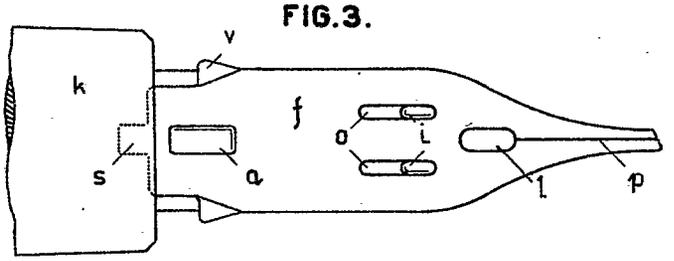


FIG. 4.

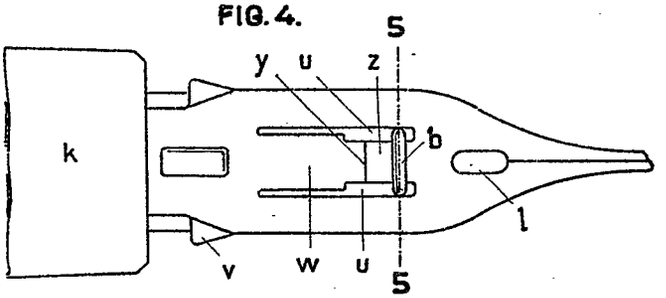


FIG. 5.

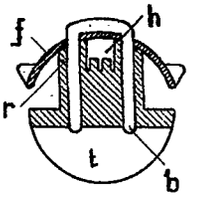


FIG. 6.

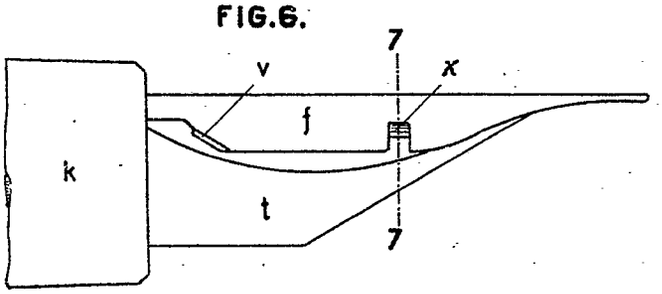


FIG. 7.

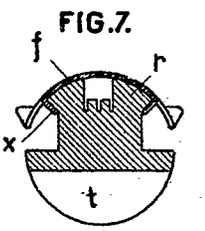
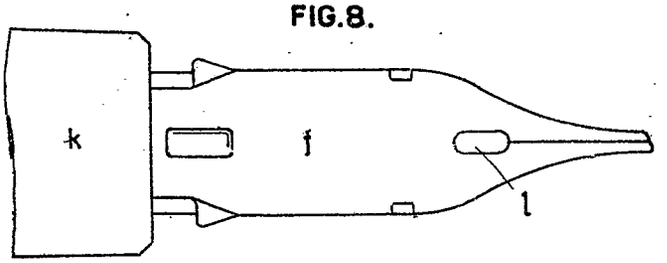


FIG. 8.



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