

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in or relating to Fountain Pens.

I, THEODOR KOVACS, a Hungarian subject, of Andreashoferstrasse, Villa Stubai, Meran, Italy, do hereby declare the nature of this invention and in what

5 manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in fountain pens of the type that can be filled from the outside without removal or manipulation of the neck or nib holder or any part connected therewith. In doing this certain difficulties were hitherto met with in providing a means

10 of escape for the air displaced during the filling operation. The air discharge duct had to be of sufficient width or diameter to permit the air bubbles to pass through it readily and with most fountain pens of this type the wide air discharge duct had to be closed again after the filling operation was completed. This however entailed a complicated construction of the fountain pen.

It has been proposed to leave the discharge duct open after filling. In this case the duct is arranged at the inner side of the nib, the ink feed, on the contrary, being situated at the upper side of the nib. As the outer orifice of the air discharge duct lies at a good distance from the point of the nib and is not closed after the filling operation, it must be made comparatively narrow so as to prevent any excessive admission of air during writing. The narrow external orifice of the duct is located at the level of the filling orifice and consequently it can easily be closed by the ink during the filling operation.

Now according to the present invention the air discharge duct in the ink feed is arranged on the upper side, but the filling chamber is arranged at the rear side of the ink feed. By this arrangement the air discharge duct can be continued

up to the point of the nib where it terminates in a comparatively wide mouth and is automatically closed by the excess ink present at that place during writing. At the point where the ink gains admission to the reservoir from the filling channel the width of the air discharge duct is so calculated that it cannot be choked by the volume of ink flowing to it during filling.

In the accompanying drawing there is shown a constructional form of the invention, Figure 1 being a longitudinal section, and Figure 2 a cross section on the line 2—2 of Figure 1.

The ink feed member T is inserted in the orifice of the pen body H. F is the nib. In the nib side of the ink feed member there is provided the air discharge duct K, which is formed at its base with the usual grooves R forming capillary ink channels and which widens out towards the interior of the pen body as shown. The filling channel M is formed by hollowing out the ink feed member at the side opposite to that in which the discharge duct is situated. It is connected by narrow transverse and circumferential passages Q with the interior of the reservoir. These passages, in consequence of their transversal position, can be made of greater width than would be possible with axial grooves, without the danger of penetration of air or escape of ink through the passages when writing. When writing the ink will flow to the nib as indicated by D and the supplementary air to take up the volume of ink displaced will enter through the air discharge duct as shown at C.

With this formation of nib holder the reservoir S can be filled through the filling channel as indicated by the arrow A whilst the air displaced during filling can escape freely through the air dis-

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charge duct in the direction of the arrow B.

Any ink that may have found its way into the protective cap V which is secured to the body by means of the screw thread U, can flow back into the reservoir if the pen be held upright before screwing off the cap. In this way the holder affords increased security against leakage and consequent soiling.

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 pen with means for filling same through the nib holder without removing or manipulating the latter or any part connected with it, characterized by the fact that the air discharge duct in the ink feed is arranged on the upper side, and the filling channel at the rear side of the ink feed.

2. A fountain pen according to Claim 1, characterized by the fact that the air discharge duct is of such a width at the point where the ink is admitted to the reservoir from the filling channel that it cannot be choked by the volume of ink flowing in during filling.

3. A fountain pen according to Claim 1 or Claim 2, characterized by the fact that the filling channel is connected with the interior of the reservoir by transverse passages.

4. A fountain pen constructed and adapted to operate, substantially as hereinbefore described with reference to the accompanying drawing.

Dated this 17th day of July, 1924.

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

