PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in or relating to Reservoir Pens.

I, YVES ZUBER, a French Citizen, of 26, Rue Neuve des Boulets, Paris, France, 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:—

The present invention relates to improvements in reservoir pens.

According to the invention a reservoir pen comprises in combination a retractible nib support provided with a capillary ink-feeding duct, an air inlet tube larger than and independent from said duct mounted on said support and extending into the reservoir and a filling device for altering the pressure in the reservoir whereby ink may be introduced through the said tube which also serves for the admission of air during writing.

A form of the invention is shown by way of example in the accompanying drawing.

The nib P is clamped between the parts S and H, the part S being extended by a tube T sliding freely in a part K. The part H comprises a lug E which passes through a longitudinal slit L in the tube U and engages in the helical screw thread F provided in the body R. The tube U is integral with the part K. Hence, rotating K in R causes the nib to advance or recede. The nib being inside, the cap *y* being screwed on the body R closes the ink reservoir and the nib is completely immersed in ink.

On the part K is shown the cap Z which protects a rubber sac C. The cap *y* is placed above the cap Z and is utilised for closing the appliance once the nib is withdrawn.

The tube T which, starting from the part S, terminates near the bottom of the reservoir of the pen, is extended by a duct V which terminates directly under the hole in the nib. These tubes or ducts T and V serve for the admission of air during the normal working of the pen. A capillary duct A terminating in its turn directly under the nib and independent of the ducts T and V permits ink to flow out during the working of the pen.

The figure shows the pen dipped in an ink container having ink at the level X, Y. The pen contains a little ink (level *a b*).

The operation of filling the pen is as follows: By suddenly compressing the sac C, the air is driven through O and T. A pressure is thus exerted on a large surface of the ink M and on a small surface of the same ink in the tube T.

Both these pressures tend to expel the ink from the appliance. Whereas, however, only a little ink escapes through the duct A under the nib P, all the ink contained in the tube T escapes by reason of its small volume, and this ink is immediately followed by compressed air forming bubbles B, the tube T being extended by the duct V.

Thus, the more rapidly the ink in the tube T is discharged, the greater is the escape of air. The escaped air is replaced by ink when the sac C is no longer pressed. The level passes from *ab* to *cd* and so on to *mh* and *ef* etc.

In four or five pressings, the reservoir pen is completely filled with ink.

Any other arrangements of the retractible part S permitting, on the one hand, flow of the ink to a point directly under the nib by a capillary duct on writing, and, on the other hand, escape of the air and introduction of the ink during the pressure alterations produced by the filling device through another separate duct (serving as an independent air inlet duct during use of the pen for writing) would merely be different constructional forms of the invention.

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 comprising in combination a retractable nib support provided with a capillary ink feeding duct, an air inlet tube larger than and independent from said duct mounted on said support and extending into the reservoir, and a filling device for altering the pressure in the reservoir whereby ink may be introduced through the said tube which also serves for the admission of air during writing.

[*Price* 1/-]

2. A reservoir pen as claimed in claim 1 in which the large tube has one end opening under a hole in the nib.

3. The reservoir pen substantially as described or substantially as shown in the accompanying drawing.

Dated this 10th day of June, 1931.

YVES ZUBER,
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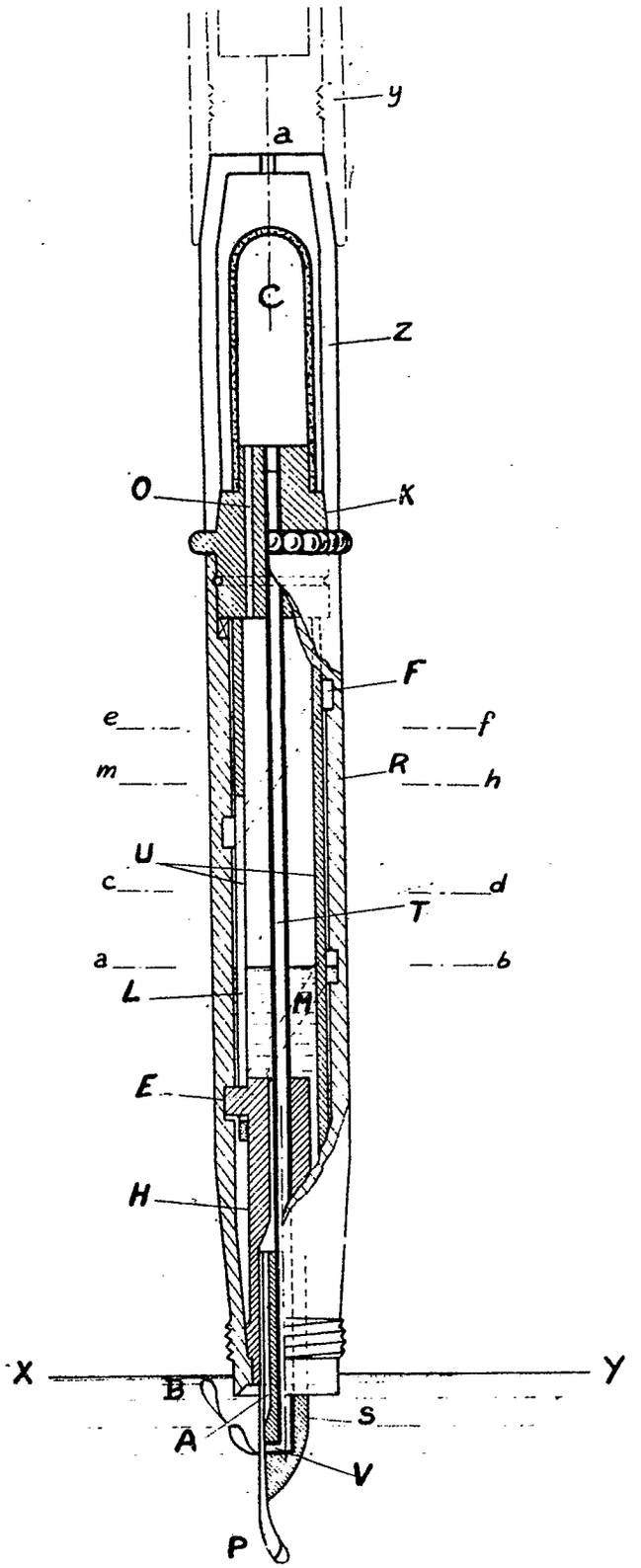

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