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PATENT SPECIFICATION

186,818

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(Patent of Addition to No. 175,382 : Nov. 11, 1920.)

Complete Accepted : Oct. 12, 1922.



COMPLETE SPECIFICATION.

Improvements in and relating to Fountain Pens.

I, LOUIS BADOIS, of 212, Boulevard Pereire, Paris, France, a French citizen, 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 fountain pens and is an improvement in or modification of the fountain pen described in the Specification of my prior Patent No. 175,382.

The improvements according to the present invention consist in combining the hollow spindle specified in the main patent with a reservoir constructed in such a manner as to allow by its own means an automatic filling of the fountain pen and its emptying of ink with a view to cleaning it.

This improved combination allows of obtaining a very important industrial result; it permits indeed of having in the same apparatus; a perfectly tight-joint closing of the ink reservoir, and an automatic filling of the fountain pen without any filler or special arrangement suitable for the filling operation being necessary.

In order to facilitate the understanding of the description of the improved arrangement according to the present invention, a longitudinal section of one mode of construction of the said arrangement has been illustrated by way of example in the accompanying drawing.

The fountain pen comprises always (as in the case of the main patent) a cap 24, 25, a starter 27, a feed regulating device 14 of the nib 13 and a cock-spindle acting together with a member carrying the nib and the feed regulating device, a tight-joint fit always existing, at *a* for instance, between the said two elements.

According to the present addition, the hollow spindle 7 instead of communicating with the reservoir which is not filled

by its own means, is combined for instance with a reservoir made of a resilient substance such as rubber, which may be twisted on itself when one of its ends is rotated leaving the other end fixed and which may afterwards be untwisted and retake for itself its normal original position.

The said resilient tube *b* is fitted at one end at *c* on the back end of a hollow spindle 7 and at its other end at *d* upon a member *e* integral with the part 2 of the fountain pen, which part may rotate here relatively to the part 1 integral with the spindle 7, thanks to a suitable screw-thread provided at *f* between the said two parts.

Under these conditions of construction it is seen that by rotating the two parts 1 and 2 relatively to each other, it is possible to bring the resilient tube in the twisted position shown at *b*¹, at which position the whole of the ink, which is contained in its untwisted position *b*, is expelled.

It is obvious that by rotating the members 1 and 2 relatively to each other in the opposite direction to the previous one, the reservoir *b* will be filled with liquid (water or ink according to the operation to be effected) on the condition, of course, that the end 34 of the fountain pen shall have been immersed into the said liquid.

It is thus seen that the improved arrangement according to the present addition allows of ensuring an automatic filling and cleaning of the fountain pen with the advantage of entirely separating from the nib the reservoir filled with ink, this double result being obtained by the combination of the reservoir *b* which is filled by its own means and of the hollow spindle 7.

It should be pointed out here that the filling (about three revolutions of the screw-thread *f*) and the actuation of the

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cock-spindle 7 (about half a revolution of the screw-thread 9) are obtained by acting upon parts which can be easily perceived, thanks to the projections provided at *g* and *h* upon the middle cylinder part 1 of the body of the fountain pen, the parts to be operated having a large bearing surface for the fingers thereby allowing of obtaining a particularly easy and certain operation.

Moreover, it should be pointed out that the special arrangement of the said parts and that of the conical and cylindrical parts of the cap 24, 25 allow of obtaining a very interesting industrial result, that is of constructing a fountain pen which shall be well held in the hand without any undue clenching of the fingers. The means allowing of obtaining these results are the projections provided at *g* and *h* upon the cylindrical part 1 of the one part, and the projections provided at *i* and *j* on the cylindrical parts 24 of the cap on the other side.

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. In a fountain pen as described and claimed in the Specification of my prior Patent No. 175,382 consisting in combining the hollow spindle specified in the

main patent with a reservoir which is capable of being filled by its own means, for instance a reservoir made of a resilient substance such as rubber, capable of being twisted and untwisted at will, one of the ends of the said reservoir being fixed on the rear part of the hollow spindle whilst its other end is fixed on a member mounted on the conical rear part of the casing of the reservoir, the said part being capable of rotating relatively to the spindle, owing to a screw-thread provided between it and the corresponding cylindrical front part which is integral with the spindle.

2. A fountain pen as claimed in Claim 1, in which the members to be operated for the filling operation or for actuating the spindle, are constructed in such a manner that they have large surfaces distributed on the whole length of the fountain pen, the body of the pen being provided with projections at its ends whereby the members to be operated can be readily perceived, the dimensions of the said members permitting, in fact, of having a large gripping surface on the said members.

3. The improved fountain pen substantially as described and as illustrated with reference to the accompanying drawing.

Dated this 9th day of June, 1921.

MARKS & CLERK.

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

