

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in or relating to Fountain Pens.

I, (Miss) JEANNE MALLAT, 53, Boulevard de Strasbourg, Paris, France, a subject of the Republic of 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:—

This invention relates to improvements in and modifications of the fountain pen described in Specification No. 141,071.

According to this invention the ink reservoir which is formed of a rubber tube is mounted at one end upon the movable head of the pen by means of a nut, the other end being secured to the body of the pen, such that any turning movement of the head twists the rubber reservoir and so exhausts the air and renders the reservoir fit for being filled with ink, also the reservoir is associated at the end fixed to the body of the pen with a feed bar so slotted or grooved by suitable conduits that a double path is provided for the ink from the reservoir to the hub.

The invention is more particularly described with reference to the accompanying drawings in which:—

Figure 1 shows the nut which holds the rubber reservoir in fixed relationship to the head of the pen.

Figure 2 is a sectional view of a pen showing how the head is attached to the rubber reservoir and illustrating the grooves or slot in the feed bar supporting the nib.

Figures 3, 7 and 8 show various modifications in the design of the conduits on the feed bar of the pen.

Figures 4 and 5 show covers or caps suitable for the pen; and

Figure 6 shows in diagrammatic form the direction of flow of the ink in the

feed bar through the grooves provided therein.

From Figures 1 and 2 it will be seen that the rubber reservoir D has a projection C fitted to it which is capable of receiving a nut J which is preferably made of aluminium. The extension C of the reservoir is so shaped that it passes through the screw-threaded section of the head B of the pen. The head B has a screw-threaded cap A which is removed to allow of the manipulation of the nut J. Whilst the nut J is being screwed in position on the extension C, the rubber reservoir D is held in a fixed position so that the screwing home of the nut J may not impart any twist to the reservoir. When the nut J is firmly fixed in position the cap A of the head B is replaced and any screw movement imparted to the head B will twist the rubber reservoir so as to expel the air and prepare the pen for being filled with ink. In order to prevent the reservoir being deformed by means of an excessive twist given to the head B, the extension C of the reservoir is provided with a lug *a* which cooperates with the nut J to form an abutment for the head B and also engages with a shoulder on the body of the pen when the head B has been raised a certain predetermined distance.

The feed bar E which carries the nib is provided with grooves or conduits such that the ink may always be ensured of a path to the nib. Thus if the pen has been held upside down for some considerable period and the air passes into the reservoir, it is found that if there is only one conduit in the feed bar E, the ink is likely to become blocked by air. With, however, the provision of a double channel-way the air is permitted to

ascend one of the said conduits or channelways as the ink passes through the other.

5 Figures 2 and 3 show two views of the feed bar E with the grooves cut in the same so as to provide a double path for the ink to the nib. These conduits or grooves, instead of being helical, may be formed by slots passing through the body of the feed bar as shown in Figures 7 and 8, and follow paths similar to those shown in Figure 6.

10 The enlarged view of the cap or cover illustrated in Figure 4 shows a screw-threaded portion F which engages the screw G on the body of the pen. The cap or cover has a removable section of a similar construction to the member A provided in the head B of the pen. The cap may be formed as shown in Figure 5 having a slot in its side to allow of the expansion of the cap as it is fitted on the body of the pen.

20 Figure 6 shows the path that the ink may take when flowing through the conduit in the feed bar and should air block the passage in one or both of these passages it is possible to have a circulation round the divided path *a c b d* and so enable the escape of air and the passage of ink to the nib.

30 Having now particularly described and ascertained the nature of my said inven-

tion and in what manner the same is to be performed, I declare that what I claim is:—

35 1. Improvements in or modifications of the fountain pen described in Specification No. 141,071 in which the rubber reservoir is fixed at one end to the body of the pen and at the other end is provided with an extension which is secured to the movable head of the pen by a nut, said extension carrying a lug which forms an abutment for the said head and is capable of engaging a shoulder on the body of the pen whereby a turning movement of the head imparts a twist to the rubber reservoir and an excessive movement of the head is prevented by the lug engaging with the shoulder on the body.

40 2. A fountain pen as claimed in Claim 1 in which the reservoir is provided at its fixed end with a feed bar having a conduit which divides into a double path at its central portion so as to facilitate the flow of ink to the nib.

45 3. The complete fountain pen substantially as described or substantially as illustrated in the accompanying drawings.

Dated this 1st day of April, 1920. 60

BOULT, WADE & TENNANT,
111/112, Hatton Garden, London, E.C. 1,
Chartered Patent Agents.

