No. 834,541. PATENTED OCT. 30, 1906.

W. A. WELTY.

FOUNTAIN PEN.

APPLICATION FILED JAN. 18, 1906.

Fig. 1.

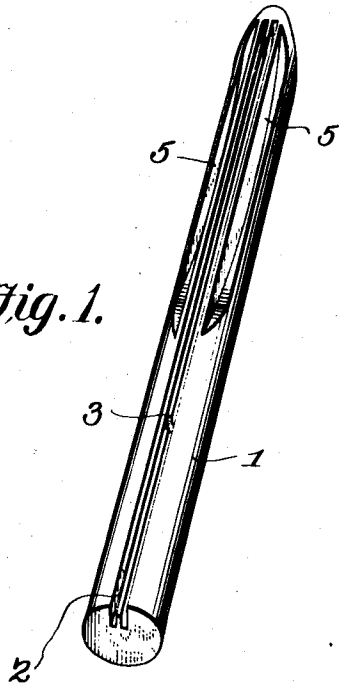


Fig. 2.

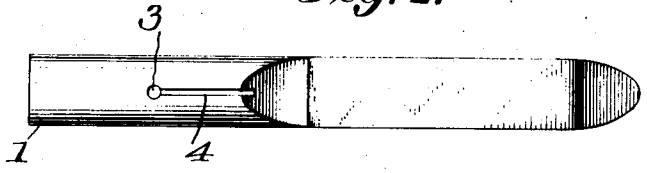
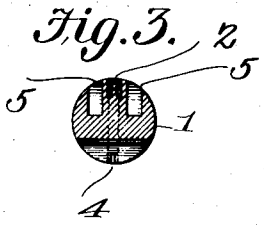


Fig. 3.



WITNESSES:

E. F. Allen

R. M. Elliott

William A. Welty,

INVENTOR,

By C. A. Snow & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM A. WELTY, OF WATERLOO, IOWA.

FOUNTAIN-PEN.

No. 834,541. Specification of Letters Patent. Patented Oct. 30, 1906.

Application filed January 18, 1906. Serial No. 296,681.

To all whom it may concern:

Be it known that I, WILLIAM A. WELTY, a citizen of the United States, residing at Waterloo, in the county of Blackhawk and State of Iowa, have invented a new and useful Fountain-Pen, of which the following is a specification.

This invention relates generally to fountain-pens, and particularly to a novel form of feed-bar therefor.

The object of the invention is to provide a feed-bar which in a novel and practical manner shall be capable of holding any surplus ink that might gather around the pen-point when the pen is nearly empty, thereby to prevent bleeding and blotting, and also of storing a sufficient quantity of ink to keep the main ink-duct moist for quite an extended period of time, whereby the pen will always start to write upon demand, and thereby obviate the annoyance and loss of time that ensues where the main ink-duct has become dry and refuses to feed the ink to the pen in proper quantities.

A further object is to dispose the air-duct at such point relatively to the terminals of the feed-bar as to overcome any tendency of the ink to run out and soil the outside of the feed, and, further, to relieve the main ink-duct or the greater portion of it from the retarding action of the air.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in a novel feed-bar for fountain-pens, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in perspective of a feed-bar constructed in accordance with the present invention and viewed from the upper side thereof. Fig. 2 is a view in plan of the under side of the feed-bar. Fig. 3 is a transverse sectional view through the feed-bar.

Referring to the drawings, 1 designates the feed-bar, which is provided with a main ink-duct 2, that extends practically throughout its entire length and is intersected intermediate of its ends by an air-passage 3, that extends transversely through the bar, preferably at right angles to its length, and communicates with an air-duct 4, disposed on the under side of the bar in alinement with the main duct and that extends from the air-duct outward and communicates at its forward end with the air, thereby to cause the air to pass to the main ink-duct by a short and direct passage instead of having to traverse the entire length of the bar, as is usual. By disposing the air-passage at the point shown it will lie wholly within the pen-section, and thereby minimize the retarding action of the air upon the ink. On each side of the main ink-duct and extending nearly to the outer end of the bar and terminating, preferably, in alinement with the end of the main ink-duct is a subduct or channel 5, the two constituting storage chambers or reservoirs for holding a sufficient quantity of ink to retain the main ink-duct in a moist condition for quite an extended period of time and which will readily flow to the pen the instant the latter is brought into contact with the paper.

As will be seen by reference to Fig. 1, there is no direct connection between the reservoirs and the main ink-duct; but there is an indirect one resulting from capillary traction that will cause the ink in the subducts to be fed to the main duct when the pen is in use. In addition to storing the ink for the purpose stated the subducts will operate to hold any surplus ink that might gather around the pen-point when the pen is nearly empty, thereby preventing bleeding and blotting in a practical and positive manner. When a pen is properly combined with the feed-bar and the two are placed within the pen-section, external air will positively be excluded from the reservoirs, inasmuch as these terminate short of the end of the bar, whereby the ink contained therein will be prevented from drying and clogging.

By the arrangement herein shown the objects sought are secured in a thoroughly feasible and practical manner, and experiments have demonstrated that when a feed-bar is constructed as described the pen, so long as the reservoirs contain any ink, will always start instantly to write, thereby obviating a serious objection urged by many against the use of fountain-pens.

I claim—

1. A feed-bar provided with a longitudinal ink-duct and with an elongated longitudinally-disposed ink-reservoir on each side of the duct, said reservoirs being closed at the bottom and out of communication with the

duct, the feed-bar having an air-passage opening into the duct and out of direct communication with the reservoirs.

2. A feed-bar having in one side a longitudinal ink-duct extending throughout practically the entire length of the bar, said bar having a short air-duct in its other side and having an air-passage connecting the ducts, and said bar also having elongated ink-reservoirs at the sides of the ink-duct and out of direct communication with said duct and the air-duct, the bottoms of said receptacles being permanently closed.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM A. WELTY.

Witnesses:
F. H. McCARTNY,
E. S. HADY.