

W. T. FITZPATRICK.
RETARDED DELIVERY DEVICE FOR FOUNTAIN PENS.
APPLICATION FILED SEPT. 8, 1919.

1,347,901.

Patented July 27, 1920.

Fig. 1.

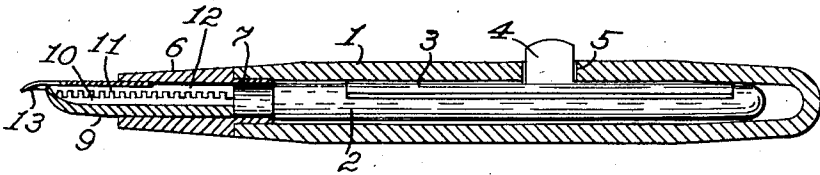


Fig. 2.

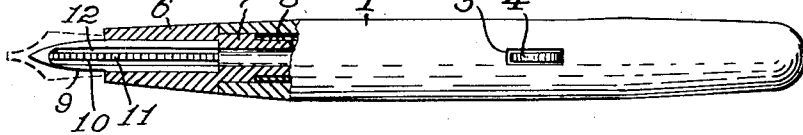


Fig. 3.

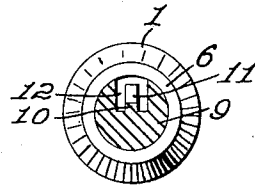
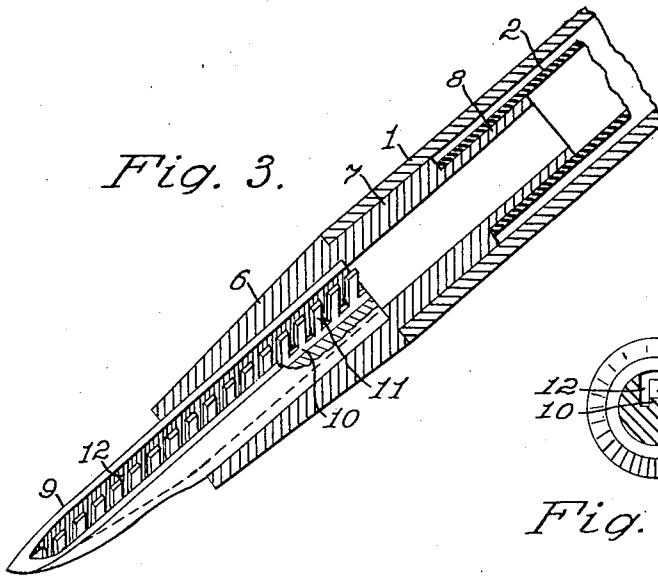


Fig. 4.

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RETARDED-DELIVERY DEVICE FOR FOUNTAIN-PENS.

1,347,901.

Specification of Letters Patent.

Patented July 27, 1920.

Application filed September 8, 1919. Serial No. 322,436.

To all whom it may concern:

Be it known that I, WILLIAM T. FITZPATRICK, a citizen of the United States of America, and a resident of Waterloo, Black-hawk county, Iowa, have invented certain new and useful Improvements in Retarded-Delivery Devices for Fountain-Pens, of which the following is a specification.

My invention relates to improvements in retarded-delivery devices for fountain pens, and the object of my improvement is to supply for such ink delivery-devices means for obstructing the flow of ink through such a device, both by mechanical interference with the flow and by aiding capillary attraction, so that the ink will not be shed too rapidly and copiously, as when the fountain pen is of a maximum size and capacity might otherwise be the case.

This object I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which Figure 1 is a central vertical longitudinal section of a fountain pen, of the self-filling type, containing my improved ink retarding-means within its delivery device, and Fig. 2 is a view of said fountain pen, in plan, with parts broken or sectioned away to particularly disclose to view the structure of the said modified delivery-device; Fig. 3 is an enlarged fragmentary longitudinal sectional view of the delivery-device as mounted removably within the delivery end of a pen barrel, and Fig. 4 is a cross section of said delivery device taken anterior to the pen barrel.

Similar numerals of reference denote corresponding parts throughout the several views.

The special construction of the fountain pen barrel and other operative parts to the rear and supplying ink to the ink delivery-device are not material to my invention, as my improvement is confined to the delivery-device. As shown, the fountain pen may be of the self-filling type, having a hollow barrel 1 closed at one end and open at the other to receive the delivery-tip 6 and inclosed delivery-device 9, said barrel also containing a collapsible elastic ink-reservoir 2 upon which is seated a longitudinally-arranged troughed pressure-bar 3 having an operating stud 4 projected through a slot 5 outwardly of said barrel.

The forward coned tip 6 of the barrel 1 has a diminished end 7 fitted into the open end of the barrel, and this diminished end has also a diminished portion 8 extended into the barrel in spaced relation to its inner wall and upon which the open end of the rubber ink-reservoir 2 is mounted and sealed. Said tip has a longitudinal central hollow, and within the forward part of this hollow is mounted a removable ink-delivery device or troughed body 9, its forward end diminished conically to approach closely the under troughed surface of the pen-nib 13 in the usual manner.

The trough 12 extends from the delivery-end of the device 9 rearwardly to communicate with the hollow of said tip 6 and with the interior of the ink-reservoir 2, to convey ink from the latter to said pen nib 13.

When the fountain pen is of a large size, having an ink-reservoir of considerable capacity, the gravity of the ink enhances the speed of flow thereof through the trough 12, resulting in flooding the pen nib, blotting, and prematurely discharging the reservoir. These inconveniences and waste I prevent by the employment of my improvement.

This consists in placing within the trough 12 obstructive means to affect and slow down the discharge of ink therethrough, and render the parts of the channel of restricted width, whereby the frictional adhesion due to increased surfaces is enlarged, which permits capillary attraction to become operative in the retardation of the flow.

This may be done by supplying a medial longitudinal ridge of dentated form as shown at 10 with detents 11 in said trough 12. The detents being numerous, frictionally obstruct the flow of ink thereover, and also much increase the frictional adhesion because of larger surfaces afforded, while the parts of the channel are diminished in width so capillary attraction may take effect in aiding retardation of flow in partially counteracting gravity. This means is effective, and it is to be understood that variations thereof are covered by my principle of invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

In a fountain-pen, a barrel having an open end, a pen-nib mounted in said open

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end, and an elongated ink-carrying body also mounted in said open end, below, longitudinal with and contacting with the troughed under face of said pen-nib, and
5 having a raised longitudinal rib medially positioned in said trough, said rib being transversely numerously upwardly dentated

along its length leading from the barrel to the anterior part of the pen-nib, the detents obstructively delaying the flow of ink along 10 said trough toward said pen-nib.

Signed at Waterloo, Iowa, this 15th day of August, 1919.

WILLIAM T. FITZPATRICK.