

W. E. GEYER.  
 FOUNTAIN PEN.  
 APPLICATION FILED OCT. 23, 1908.

949,425.

Patented Feb. 15, 1910.

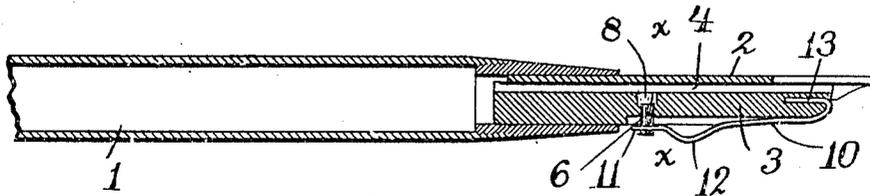


Fig. 1

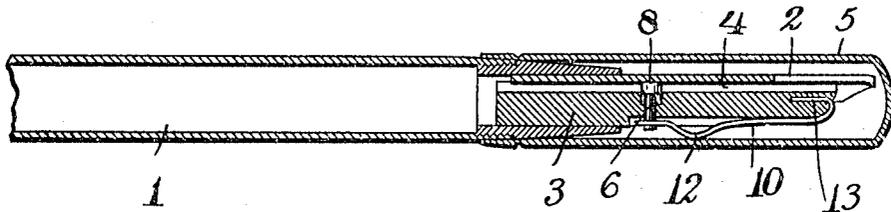


Fig. 2

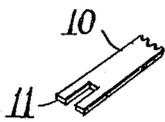


Fig. 5

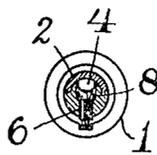


Fig. 3



Fig. 4

Witnesses;  
 M. W. Lapham.  
 E. J. Tilton

Inventor,  
 William E. Geyer;  
 By A. B. Lapham,  
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# UNITED STATES PATENT OFFICE.

WILLIAM E. GEYER, OF CAMBRIDGE, MASSACHUSETTS.

FOUNTAIN-PEN.

949,425.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed October 23, 1908. Serial No. 459,170.

*To all whom it may concern:*

Be it known that I, WILLIAM E. GEYER, a citizen of the United States, residing at Cambridge, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

The object of this invention is the construction of means for automatically stopping the flow of the ink to the pen by the simple act of capping the pen.

Referring to the drawings forming part of this specification, Figure 1 is a longitudinal section of a fountain pen embodying my invention, with its cap removed and the pen ready for use. Fig. 2 is a similar view, but with the cap protecting the pen. Fig. 3 is a cross-section of the same on the line X--X in Fig. 1. Fig. 4 is an enlarged side view of the closing plunger. Fig. 5 is a perspective view of the operative end of the plunger-controlling spring.

The reference numeral 1 designates the handle and ink-chamber of the fountain pen, and 2 the pen carried thereby. This pen is held by means of the plug 3 in the mouth of the handle in the usual manner; a groove or duct 4 being formed along the surface of the plug in contact with the concave surface of the pen for the purpose of conveying the ink from the ink-chamber 1 thereto. While said duct is proportioned to convey no more than the proper amount of ink to the pen when in use, yet whenever the fountain pen is put away in one's pocket with its cap lowermost, the heat and motion of the body will frequently cause more or less of the ink to leak through the duct into the cap 5, so that when the article is again taken out for use, and the cap removed, the escaped ink will drip upon the hands and garments. To remedy this by causing the application of the cap to automatically close the duct 4, I provide the small plunger 6 transversely slidable in the plug 3 and having a head 8 which completely closes said duct when the plunger is moved inward, but which retreats into the body of the plug when drawn outward. To appropriately operate this plunger, its outer end is formed with an annular groove 9 which is engaged by the bifurcated extremity of the leaf spring 10; the other end of the spring being adapted to be held by the plug 3 in such a manner that when the cap is absent, the

spring resiliently retracts the plunger. Near said bifurcated end 11 the spring is formed with an outward bend or hump 12 against which the cap comes in contact when pushed upon the handle to inclose the pen. This contact presses the plunger inward and thereby closes the ink-duct. Said plunger is put in place before the pen 2 is applied to the plug, and after that the spring-end 13 is forced into the terminal opening formed therefor in the outer end of the plug, and the bifurcation 11 made to engage the annular groove 9.

I prefer to have the head 8 of the plunger formed of some yielding material, as soft rubber, so that when the plunger is pressed inward with its head against the surface of the pen, said head will be made to spread out laterally, and tightly fit against the sides of the groove or duct 4, thereby shutting off the passage of ink. At the same time, the shoulder of this head will be made by such lateral spreading, to fit the edges of the depression within which it seats when the plunger is retracted. This serves to keep the ink from issuing out through the plunger-opening to the exterior of the plug. For this latter purpose, it is necessary to have the head 8 substantially cylindrical in shape, and to be of greater length than the depth of the duct so that it will not wholly leave its seat even when pressed against the pen.

What I claim as my invention and for which I desire Letters Patent, is as follows, to wit;—

1. A fountain pen comprising an ink chamber, a pen, a plug having a longitudinal duct for delivering ink to said pen, a cap for the fountain pen, a plunger slidable transversely in said plug adapted to close said duct when pressed inwardly, and a leaf spring connected at its free end with said plunger for holding the latter in its position for leaving said duct open; said spring being formed with a protuberance and having its fixed end between its free end and said pen's point, whereby the application thereto of said cap slides the edge of the latter smoothly along said spring without resistance.

2. A fountain pen comprising an ink chamber, a pen, a plug having a longitudinal duct for delivering ink to said pen, a cap for the fountain pen, a plunger slidable transversely in said plug adapted to close

said duct when pressed inwardly, and a leaf spring connected at its free end with said plunger for holding it normally open; said spring having an outwardly protuberant bend near its free end, and having its opposite end bent over substantially parallel with the body of the spring; the outer end of said plug being recessed to tightly receive said bent end, and said spring having said end located between its main body and the pen-point.

3. A fountain pen comprising an ink chamber, a pen, a plug having a longitudinal groove therein through which ink is conducted to said pen, a depression being formed in said plug at a side of said groove

and an opening from said depression through to the exterior of the plug, a plunger movable in said opening having a head fitted to said depression, resilient means normally retaining said head within said depression, a cap for the fountain pen, and means operated by said cap for pressing said plunger inward and causing its head to close said groove.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 20th day of October, 1908.

WILLIAM E. GEYER.

Witnesses:

GEO. H. METCALF,  
DAVID W. PENTZ.