Dec. 16, 1930. A. GOLDKNOPF 1,785,680

FOUNTAIN PEN

Filed May 18, 1929

Fig. 1.

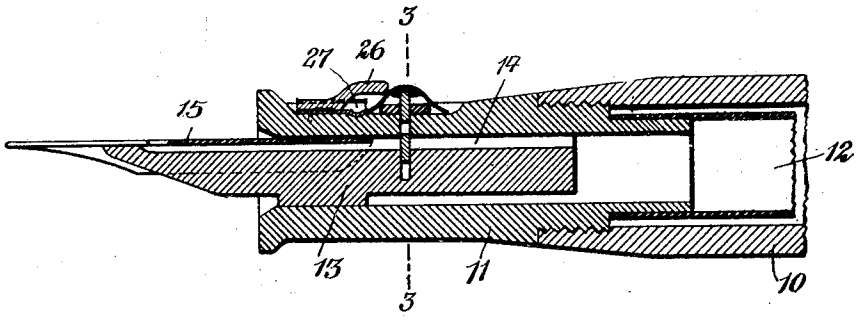


Fig. 2.

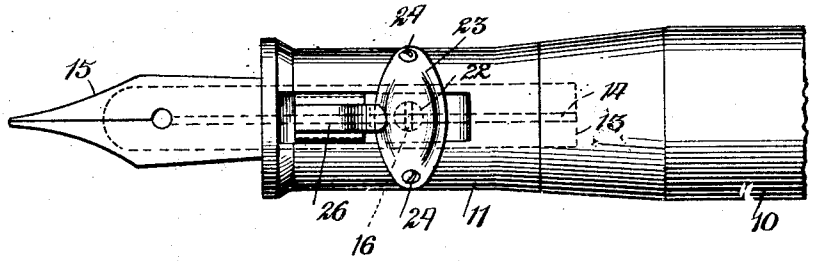


Fig. 3.

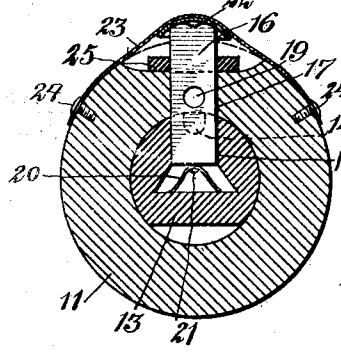


Fig. 4.

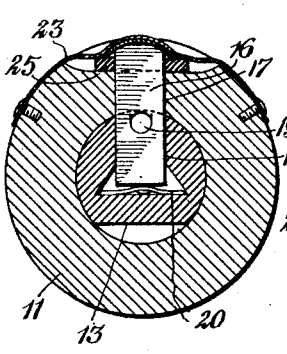
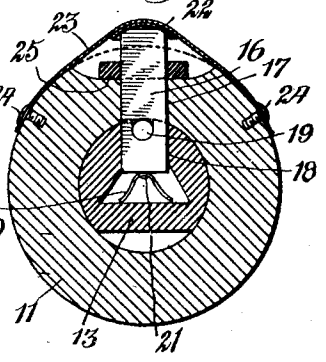


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE

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FOUNTAIN PEN

Application filed May 18, 1929. Serial No. 364,174.

This invention relates to a fountain pen ink flow controlling means.

One of the objects of the invention is to provide a fountain pen with means enabling the writer to control or regulate the flow of ink while writing with the pen.

Another object is to provide a fountain pen with means of the indicated character which will render the pen leak-proof.

Another object is to provide a fountain pen with means of the indicated character in convenient access to the writer for manipulation with the index finger held in the usual position while writing with the pen.

Another object is to provide a fountain pen with means enabling the writer to control or regulate the flow of ink while writing with the pen, which operates automatically to shut off the flow of ink, in combination with manipulatable means cooperable with the first mentioned means to keep the ink flow passage open, to enable the writer to write with the pen in the usual manner, and also to enable the filling of the pen.

The invention will be best understood from a consideration of the following specification taken in conjunction with the accompanying drawing forming a part thereof, with the further understanding that the drawing illustrates only one example of the invention and that the invention is not limited to any strict conformity with the showing in the drawing, but that details of construction may be modified and rearranged without departing from the spirit of the invention, the scope of which is limited only by the terms of the appended claims.

In the drawing:

Fig. 1 is a section through the writing end of a fountain pen embodying the features of the invention.

Fig. 2 is a top view.

Fig. 3 is an enlarged transverse section taken on the line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 3 but showing the valve member in the open position.

Fig. 5 is a section showing a modification of the invention.

Referring now more particularly to the drawing it will be apparent that there is shown parts of a fountain pen consisting of a barrel 10 having a detachable writing end 11 of tubular construction to which is connected an ink sack 12, and there being an ink feed piece 13 positioned in the end 11, said piece 13 having an ink feed passage 14 therein which feeds ink to the pen nib 15 associated with the piece 13.

In order to control or regulate the flow of ink from the sack 12 to the nib 15 there is provided means of the present invention to be presently described. A valve member 16 is arranged for movement in alined slots 17 and 18 respectively in the end 11 and piece 13. The valve member 16 has an orifice 19 for registration with the passage 14. The inner end of the valve member 16 is under the influence of a spring 20 which has a normal tendency to constantly urge the valve member 16 to a position to obstruct the passage 14. The spring 20 may be of any preferred form and in the present instance is of flat construction and is attached as at 21 to the valve member 16 and the ends thereof bear against the wall of the slot in the piece 13. The outer end of the valve member 16 has a push button 22 which is constantly kept in contact with a resilient shield or guard 23 of suitable material such as properly tempered metal. The shield or guard 23 is held in place by suitable fastening elements or screws 24 driven into the end 11. A rubber gasket 25 surrounds the valve member 16 and is secured to the end 11. The gasket 25 prevents any leakage of ink around the valve member 16. It will now be understood that the means hereinabove described constitutes a device for controlling or regulating the flow of ink through the ink feed passage 14; that the device is automatically operable to shut off the flow of ink through the passage 14 to the nib 15, and is also in convenient access to the writer for manipulating the push button 22 with the index finger held in the usual position while writing with the pen to obtain the desired flow of ink.

In order to retain the valve member 16 in a position so that the orifice 19 will be constantly in registration with the ink feed passage 14 to allow ink to flow continuously, or

to enable the filling of the ink sack 12 there is provided means in the form of a catch or check 26 slidably mounted on the barrel end 11 in any preferred manner such as by the provision of a guide 27 secured to the end 11. The catch or check 26 is engageable with the shield or guard 23 directly over the push button 22 when slid to the retaining position, to thus hold the valve member 16 in the open position in which the orifice 19 is in registration with the ink feed passage 14. It will be apparent that the catch or check 26 is also in convenient access to the writer for the manipulation thereof with the index finger while writing with the pen. The catch or check 26 thus serves for the purpose of obtaining a constant flow of ink to the nib 15, and also serves advantageously for retaining the valve member 16 in a non-obstructing position so that the ink sack may be readily filled with ink whenever the occasion arises.

It is to be understood that the position of the orifice in the valve member 16 may be such that in the normal position of the valve member the orifice therein will be in registration with the ink feed passage as shown in Fig. 5. In other respects this form of the invention will be similar to that described hereinabove and corresponding parts have applied thereto similar reference numerals. In this form of invention the catch or check will serve for the purpose of retaining the valve member 16 in the obstructing position to shut off the flow of ink from the ink sack 12.

From the foregoing it will be apparent that there has been described a fountain pen having provision enabling the writer to control or regulate the flow of ink while writing with the pen, which is deemed an important advantage since overflow and blotting is prevented; that when the pen is not in use it will be prevented from leaking while being carried about on the person; and that the parts of the invention may be readily detached for the purpose of making repairs or replacement of parts whenever necessary.

I claim:

1. The combination with a fountain pen, of means adapted to control the flow of ink, said means being automatically operable to shut off the flow of ink to the nib, and also manipulatable to allow the ink to flow to said nib, and means manipulatable by the writer to check the means first mentioned to obtain a constant flow of ink while writing with the pen.

2. A fountain pen having the combination of a barrel end, an ink feed piece having an ink passage therein positioned in said barrel end, a valve member positioned in slots in the barrel end and feed piece for movement to control the ink passage, means interposing the feed piece and valve member having a normal tendency to urge the valve member to a position to obstruct said passage and to yieldingly retain said valve member in the obstructing position, said valve member extending exteriorly of said barrel end to enable the writer to manipulate the same while writing with the pen to obtain the desired flow of ink.

3. A fountain pen having the combination of a barrel end, an ink feed piece having an ink passage therein positioned in said barrel end, a valve member positioned in slots in the barrel end and feed piece for movement to control the ink passage, means interposing the feed piece and valve member having a normal tendency to urge the valve member to a position to obstruct said passage and to yieldingly retain said valve member in the obstructing position, said valve member extending exteriorly of said barrel end to enable the writer to manipulate the same while writing with the pen to obtain the desired flow of ink, and a slide positioned on the barrel end manipulatable and cooperable with the valve member to releasably hold the latter in non-obstructing position.

Signed at New York, in the county of New York, and State of New York this 16th day of May, A. D. 1929.

ABRAHAM GOLDKNOPF.