

G. H. HEINDSELMAN.
 FOUNTAIN PEN FEED VALVE.
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988,096.

Patented Mar. 28, 1911.

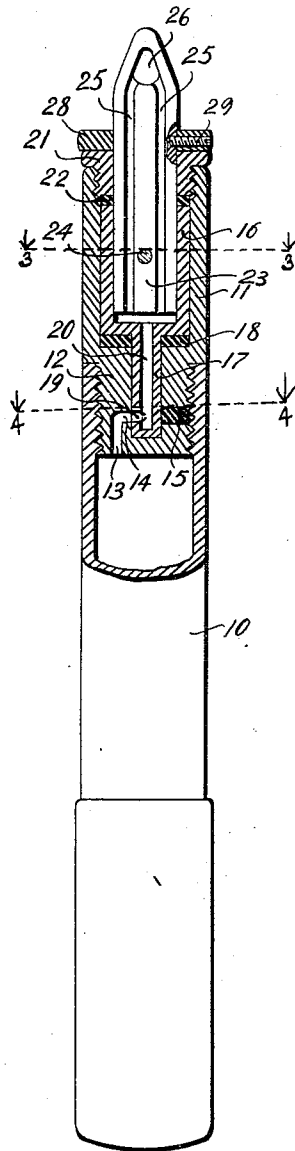


Fig. 1

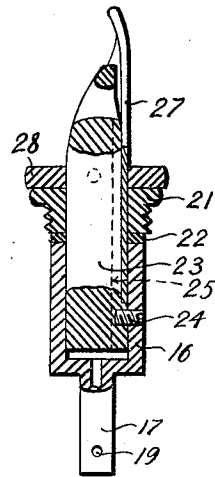


Fig. 2

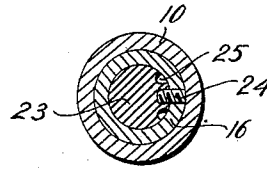


Fig. 3

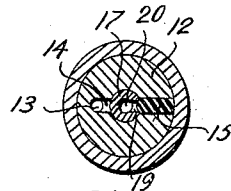


Fig. 4

Witnesses

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GEORGE H. HEINDSELMAN, OF PROVO, UTAH.

FOUNTAIN-PEN FEED-VALVE.

988,096.

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To all whom it may concern:

Be it known that I, GEORGE H. HEINDSELMAN, a citizen of the United States, residing at Provo, in the county of Utah and State of Utah, have invented certain new and useful Improvements in Fountain-Pen Feed-Valves, of which the following is a specification.

This invention relates to fountain pens and particularly to feed valves for the same, said feed valves being of such construction that they will prevent all leakage.

It also contemplates the construction of a feed valve wherein the same may be set when it is desired to use the pen and also may be closed when the pen is not in use, said valve being provided with means whereby the same may be retained in a closed position.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed and illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a pen partly in section, illustrating the construction of the feed valve; Fig. 2 is a side elevation partly in section of the feed valve illustrating the manner in which the pen is carried thereby; Fig. 3 is a section taken along the line 3—3 of Fig. 2; Fig. 4 is a section taken along the line 4—4 of Fig. 1.

Referring more particularly to the drawings 10 indicates a barrel of a fountain pen constructed in the usual manner, said barrel being interiorly threaded at its lower terminal. An auxiliary barrel is secured to the main barrel 10 by the reduced threaded shank 12, said shank being provided with a tubular extension of the bore of the auxiliary barrel 11. The lower terminal of the auxiliary barrel 11 is likewise interiorly threaded to provide a means for securing the valve, hereinafter described, therein. A horizontal passage or duct 13 pierces the inner terminal of the shank 12 to one side of the center and extends inwardly a portion of the length of the shank. A transverse opening 14 is then drilled from the opposite side of the shank 12 to the horizontal passage 13 and extends through the bore of the shank to the horizontal passage 12, thus forming a connection between the horizontal passage 12 and the bore of the shank. The portion of the bore 14 opposite to the side of the shank

containing the horizontal passage 13 is provided with a slightly resilient plug 15 which projects a portion of its distance into the bore of the shank 12. A tubular valve 16 is mounted in the auxiliary barrel 11 and is provided with a hollow shank 17 which extends into the bore of the shank 12, the former completely filling the latter. A washer 18 is interposed between the tubular valve 16 and the shoulder formed by the shank 12 of the auxiliary barrel 11. This washer prevents the leakage between the joint of the valve and the auxiliary lever. The shank 17 is pierced on one side thereof by an opening 19 which is so located on the shank that the same is adapted to register with the transverse passage 14 and open into the bore 20 of the shank 17. A thimble 21 is threaded in the lower terminal of the auxiliary barrel 11 and is spaced from the lower terminal of the valve 16 by the washer 22 interposed therebetween. A feed 23 is mounted in the valve 16 and is retained therein by a set screw 24 which pierces the valve and the feed, thus when the valve is rotating the feed will likewise rotate. This feed is provided with the longitudinal grooves 25 which converge in the opening 26 at the end of the feed, thus preventing the pen 27, clamped between the feed and the valve 16, from being flooded, said pen being of the usual construction. A finger piece 28 is carried by the feed 23 by the set screw 29 in such a manner that the same rests flush against the thimble 21 and is adapted to rotate said feed and consequently the valve within the auxiliary barrel 11. As feed is slightly spaced from the shoulder of the valve 16 there will be sufficient room for a reservoir to be supplied and also for the ink to be distributed to both of the longitudinal grooves 25.

From the foregoing it will readily be seen that when the valve is in the position illustrated in Fig. 1 the same will be retained in this position by the pressure of the plug 15 against the shank and that the ink will pass from the barrel 10 through the passage 13, through the transverse passage 14, through the opening 19, to the bore 20 to the space between the feed and the shoulder of the valve from which it will pass down the grooves 25 to the pen in the usual manner. But upon the rotation of the finger piece 28 the coöperation between the passage 14 and the opening 19 will be broken

and the plug 15 will engage the opening 19 as is illustrated in Fig. 4, thus bringing a solid wall across the passage 14 and preventing the passage of the ink, thus completely closing the feed.

It will readily be seen that when it is desired to fill the pen the auxiliary barrel may be removed in the usual manner, thus in no way deranging the various elements of the valve.

Having thus described my invention, what is claimed as new is:

1. In a fountain pen, the combination with a barrel, of an auxiliary barrel carried thereby, having an angular passage formed in said auxiliary barrel to conduct fluid from the main barrel, a tubular valve carried by said auxiliary barrel adapted to cooperate with said angular passage, a feed and pen permanently carried by said valve, and means whereby said valve may be locked in open or closed position.

2. In a fountain pen, the combination with a barrel, of an auxiliary barrel carried thereby, said auxiliary barrel having an angular passage therein, a resilient plug carried in said auxiliary barrel on the side thereof opposite to said angular passage, a valve rotatably mounted in said auxiliary

barrel adapted to cooperate with said angular passage and said resilient plug, a feed and pen carried by said valve, and means whereby said valve may be rotatably retained in place.

3. In a fountain pen, the combination with a barrel, of an auxiliary barrel having an angular passage therein, a resilient plug carried in said auxiliary barrel on the side thereof opposite to said angular passage, a valve rotatably mounted in said auxiliary barrel adapted to cooperate with said angular passage and said resilient plug adapted to cut off the flow of liquid from the main barrel when desired, a feed and pen carried by said valve, a thimble threaded in the lower terminal of said auxiliary barrel adapted to retain said valve in place, a finger piece rigidly carried by said feed adapted to rotate said valve so that the plug aforesaid may engage the valve to retain the same in an open or closed position.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. HEINDSELMAN.

Witnesses:

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KARL BANDLEY.