G. H. HEINDSELMAN.

FEED VALVE ACTION FOR FOUNTAIN PENS.

APPLICATION FILED SEPT. 4, 1909.

950,596. Patented Mar. 1, 1910.

Fig. 1

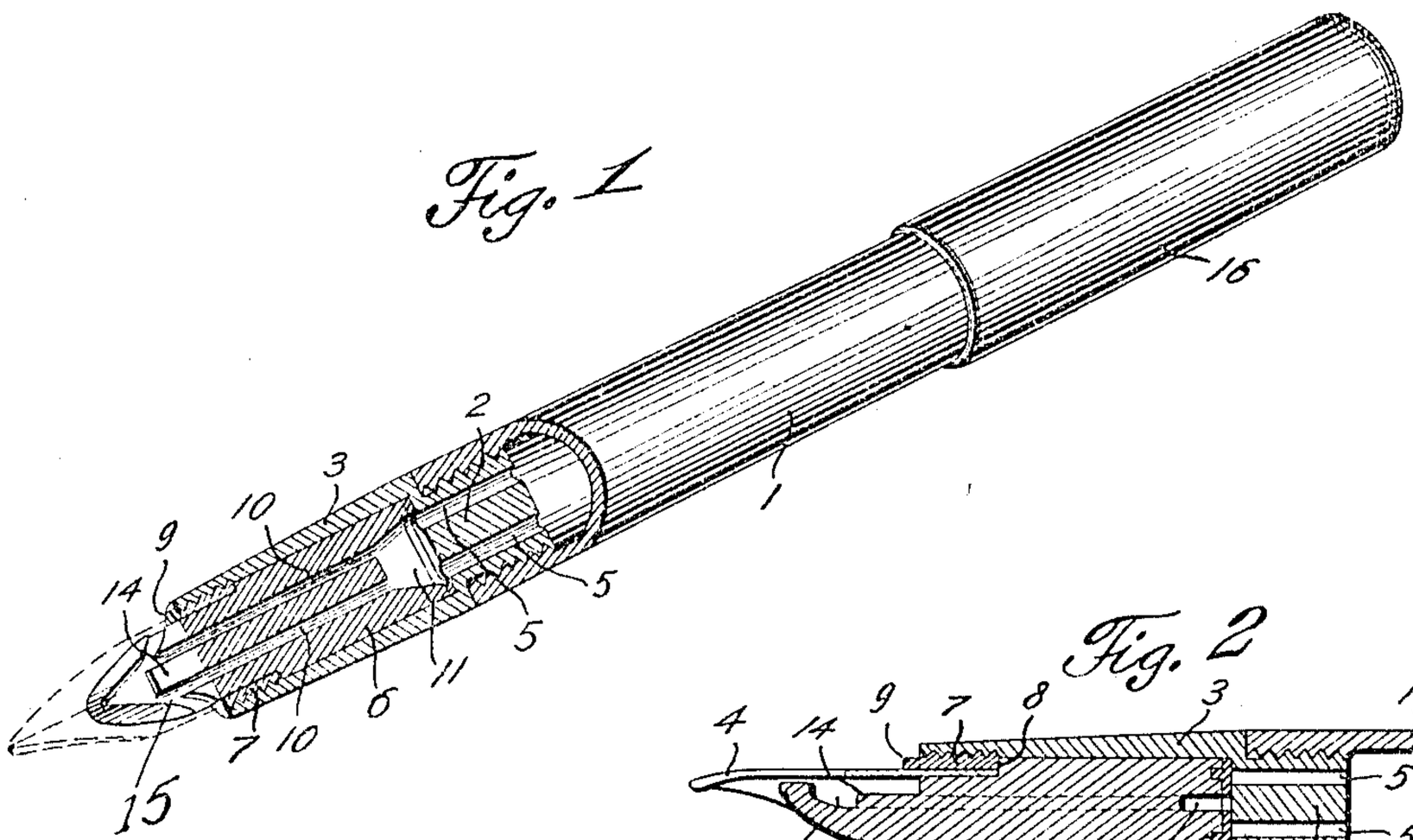


Fig. 2

Fig. 3

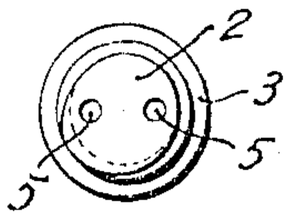


Fig. 4

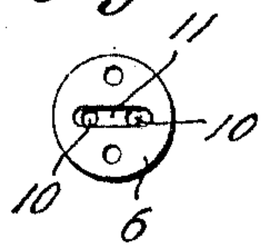
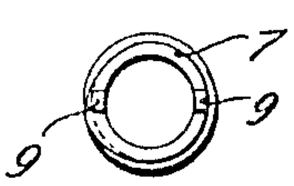


Fig. 5



Witnesses

E. Larson

N. J. Kern

Inventor

G. H. Heindselman

By Peirce & Robb

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE H. HEINDSELMAN, OF PROVO, UTAH.

FEED-VALVE ACTION FOR FOUNTAIN-PENS.

950,596. Specification of Letters Patent. Patented Mar. 1, 1910.

Application filed September 4, 1909. Serial No. 516,194.

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 Feed-Valve Actions for Fountain-Pens, of which the following is a specification.

The object of this invention is to provide certain improvements in fountain pens and designed to improve and simplify the construction of those most commonly in use.

A feature of the invention resides in the provision of a peculiar form of feed valve carried by a detachable pen section of the pen, and by manipulation of which valve the supply of ink to the pen section may be cut off and liability of leakage of the pen entirely avoided.

For a full understanding of the invention reference is to be had to the following detail description and the accompanying drawings, in which:

Figure 1 is a perspective view broken away to partly show in section a pen embodying the invention; Fig. 2 is a vertical longitudinal section taken through the detachable section of the body of the pen; Fig. 3 is an inner end view of the detachable section of the barrel; Fig. 4 is a view of the inner end of the valve, and Fig. 5 is an end view of the detachable thimble.

Describing the invention in detail and referring particularly to the drawings, 1 denotes the barrel or fountain of the pen consisting of the usual body, said barrel being closed at one end and open at its opposite end. The open end of the barrel 1 is internally threaded to receive the threaded extension 2 of a detachable section 3, and which section carries the pen point 4. The threaded extension 2 of the detachable section 3 is provided with spaced longitudinal feed openings 5 leading from the outer end of the extension 2. The feed valve 6 which is rotatable within the section 3 is held in place by means of a thimble or bushing 7 which is provided with external threads and is screwed into the lower end portion of the section 3. The inner end of the thimble 7 is adapted to engage a shoulder 8 on the middle portion of the valve 6 and the pen point 4 is attached to the valve 6 by being frictionally interposed at its butt end between the thimble 7 and the valve, as shown at 4'. Detachment and replacement of the thimble 7 is facilitated by the provision on the outer end of the thimble of two opposite lugs or projections 9 which render it easy to unscrew and screw the thimble in place.

Longitudinally of the valve 6 are provided spaced ink supply channels 10 the inner ends of which merge into an elongated narrow supply opening 11 at the inner end of the valve. The opening 11 is sufficiently long to connect the feed openings 5 of the section 3 of the pen, but when the pen is not used it is contemplated that the valve 6 be turned so as to occupy a position in which the supply opening 11 is transverse to a plane passing through the openings 5, as shown in Fig. 2 of the drawings, whereby the supply of ink from the barrel or fountain 1 to the pen point 4 is cut off.

The pen is shown adjusted for use in Fig. 1 wherein the ink is adapted to flow through the openings 5, opening 11 and channels 10 to the pen point 4. A washer 12 is preferably positioned on the inner end of the valve 6 by means of projections 13 on the inner side of the washer, and said washer affords a sufficiently tight connection between the parts 2 and 6 to prevent likelihood of leakage of the pen when the valve is closed with respect to the extension 2 and its openings 5.

The central partition 14 of the valve 6, and which separates the channels 10 from each other extends into the space between diverging channels 15 at the outer end of the valve 6 and beyond the adjacent ends of the channels 10, permitting air to pass into the barrel of the pen through the channels 10 whereby to increase the free flow of ink to the pen point 4 in the use of the device. The outer end of the valve 6 which projects from the section 3 of the pen and supports the pen point 4 is of reduced diameter and cut away suitably to provide channels 15 that diverge and intersect with the channels 10.

A suitable cap 16 is of course employed to cover the point 4 when the pen is not in use.

Having thus described the invention what is claimed as new is:

1. In a fountain pen, the combination of a barrel, a detachable section provided with an extension screwed into an end of the barrel, said extension having feed openings therethrough, a feed valve rotatable in the

detachable section and provided with longitudinal channels in spaced relation, said channels merging at their inner ends into a supply opening and connecting at their outer ends with direct feed channels, the valve being rotatable so that the supply opening connects the feed openings of the extension aforesaid, or lies between said feed openings to shut off the supply of ink, and a pen point arranged at the lower end of the detachable section adjacent to the feed valve.

2. A fountain pen comprising a barrel having a threaded open end, a detachable section provided at one end with an extension screwed into the open end of the barrel and having longitudinal spaced feed openings, a valve rotatable in the detachable section and provided at its inner end with an elongated supply opening rotatable to connect the feed openings of the extension, or lie between said feed openings and out of communication therewith, the middle portion of the feed valve having an external shoulder and said valve being provided with spaced channels leading from its supply opening to its outer end, a pen point fitted against the outer end of the feed valve above the channels thereof, and a detachable thimble screwed into the outer end of the detachable section and bearing against the shoulder of the valve to prevent displacement thereof but permitting its rotation freely.

3. In a fountain pen, the combination of a barrel, a detachable section provided with an extension screwed into an end of the barrel, said extension having feed openings therethrough, a feed valve rotatable in the detachable section and provided with longitudinal channels in spaced relation, said channels merging at their inner ends into a supply opening and connecting at their forward extremities with the rearwardly diverging direct feed channels, the valve being rotatable so that the supply opening connects the feed openings of the extension aforesaid, or lies between said feed openings to shut off the supply of ink, a pen point arranged at the lower end of the detachable section adjacent to the feed valve, and a detachable thimble screwed into the outer end of the detachable section and bearing against the shoulder of the valve to prevent displacement thereof but permitting its rotation freely, said thimble bearing against and retaining the pen.

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

GEORGE H. HEINDSELMAN.

Witnesses:

ARNOLD DIXON,

J. D. DIXON.