

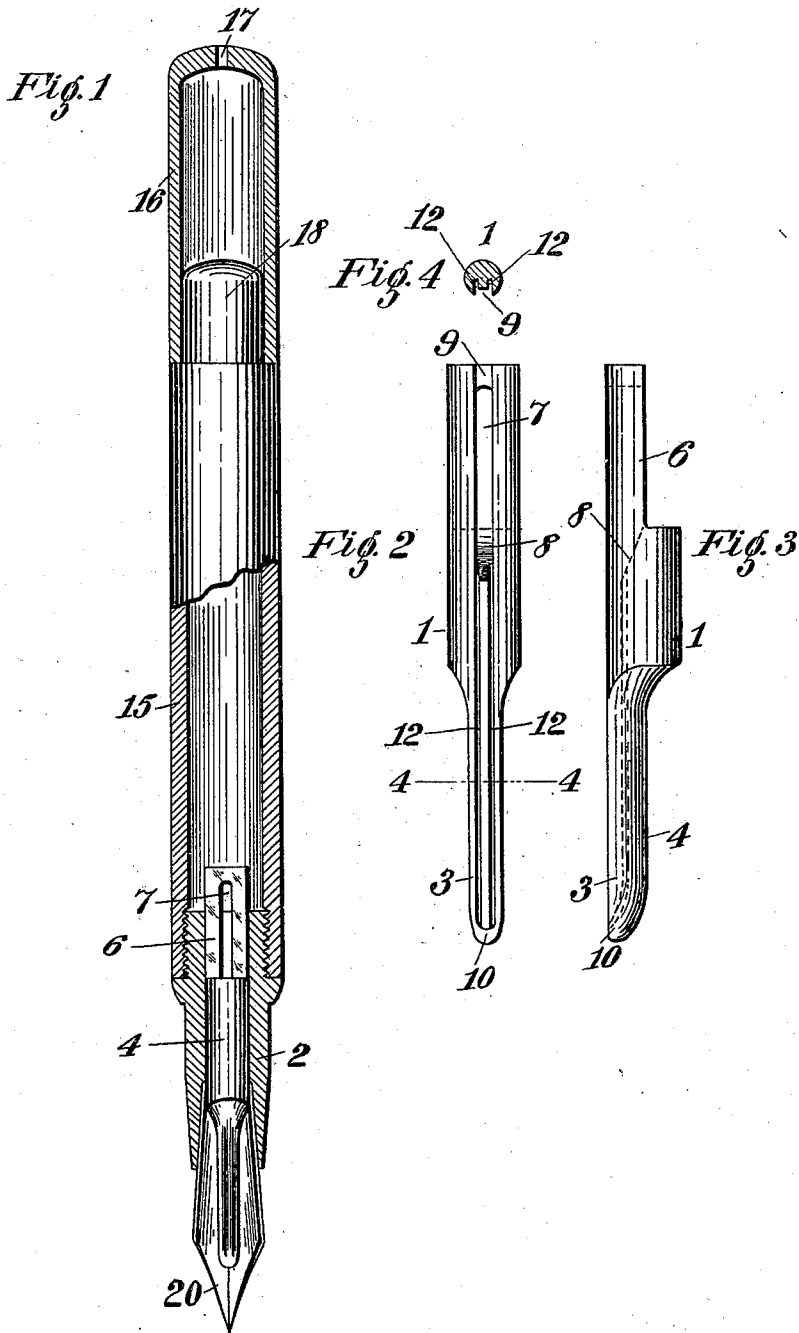
No. 691,974.

Patented Jan. 28, 1902.

W. W. SANFORD.
FOUNTAIN PEN.

(Application filed Apr. 26, 1901.)

(No Model.)



Witnesses
Bert. C. Jones.
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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 691,974, dated January 28, 1902.

Application filed April 26, 1901. Serial No. 57,623. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. SANFORD, a citizen of the United States of America, and a resident of East Orange, in the county of Essex, in the State of New Jersey, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to improvements in fountain-pens, and particularly in the feed-bars thereof.

The purpose of the invention is to furnish a feed-bar which will provide a quick and reliable feed of ink to the pen, will obviate any tendency of a bubble should one form at the end of the feed-bar, to prevent the feed of the ink, and which will quickly burst the bubble.

The details of the invention are set forth in the following description and illustrated in the accompanying drawings, whereof—

Figure 1 is a longitudinal sectional elevation of a fountain-pen equipped with my improved feed-bar. Fig. 2 is an enlarged face elevation of the feed-bar, and Fig. 3 an edge view of the same. Fig. 4 is a cross-section on the line 4 4 of Fig. 2.

The feed-bar 1, preferably of hard rubber and adapted to fit tightly into the section 2, as seen in Fig. 1, is shaped as clearly shown in face and edge views in Figs. 2 and 3. Termining that side 3 of said feed-bar which is against the pen 20 the "face" and the opposite rounded side 4 the "back," then the said back is cut away for some distance from the inner end of the feed-bar, as indicated at 6 in Fig. 3, and a slot 7 is cut through the thinned part of the bar. The front or lower wall of said slot 7 is beveled, as indicated by the dotted line 8 in Fig. 3. Said slot 7 is so positioned that a part of it projects inward beyond the end of said section 2, Fig. 1. From the lower or outer end of said slot 7 a longitudinal groove 9 is formed, which extends nearly but not quite to the end of the feed-bar, leaving a toe 10 at the extreme tip of said bar not slotted. In the bottom of said groove 9 are formed longitudinal (one or more)

capillary grooves 12 12, usually two in number, and which grooves also extend to the toe 10. The purpose of the said capillary grooves is to promote the quick flow of ink to the pen. Said groove 9 is preferably, but not necessarily, also extended from the upper end of said slot 7 to the upper edge of the bar 1, Fig. 2.

The reservoir or penholder 15 being filled with ink and the section 2 screwed to place, the ink normally feeds both past the end of said feed-bar 1 and through said slot 7 to the groove 9 and capillaries 12 12, and thence to the pen 20. Said pen 20 is of the usual kind for fountain-pens and has an air-hole (not shown) which communicates with said groove 9 to supply air to the reservoir 15. Air-bubbles are most likely to form either at the upper end of the feed-bar 1 or at the shoulder at the lower end of the cut-away part 6. Should a bubble form at the upper end of said feed-bar 1, there will be ink below the bubble, which can enter the said slot 7 and go from thence to the grooves 9 12 12 and to the pen. Should a bubble form at the said shoulder at the lower end of the cut-away part 6, the ink above the bubble can enter the upper part of said slot 7 and go to the pen by said grooves 9 12 12, so that in no event can a bubble check the flow of ink to the pen. In either case the draft of the ink now quickly destroys the bubble, and so under all circumstances the feed goes on regularly and as freely as desired.

Now having described my improvements, I claim as my invention—

1. In a feed-bar for fountain-pens the combination with a reservoir of a slot 7 through the upper part of the feed-bar a part of said slot being freely open to the interior of the reservoir, a groove 9 extending from the upper end of said slot 7 to the upper end of said feed-bar and from the lower end of said slot 7 nearly but not quite to the lower end of said feed-bar, and capillary grooves 12 in the bottom of said groove 9, substantially as described.

2. The combination in a feed-bar for fountain-pens of a reduced part 6 near the upper

end of said feed-bar, a slot 7 for the ink
through said part 6 and having an inclined
wall 8, a groove 9 from said inclined wall 8
nearly but not quite to the lower end of said
5 feed-bar, and capillary grooves 12 in the bot-
tom of said groove 9, substantially as de-
scribed.

Signed at New York city this 19th day of
April, 1901.

WILLIAM W. SANFORD.

Witnesses:

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HENRY V. BROWN.