

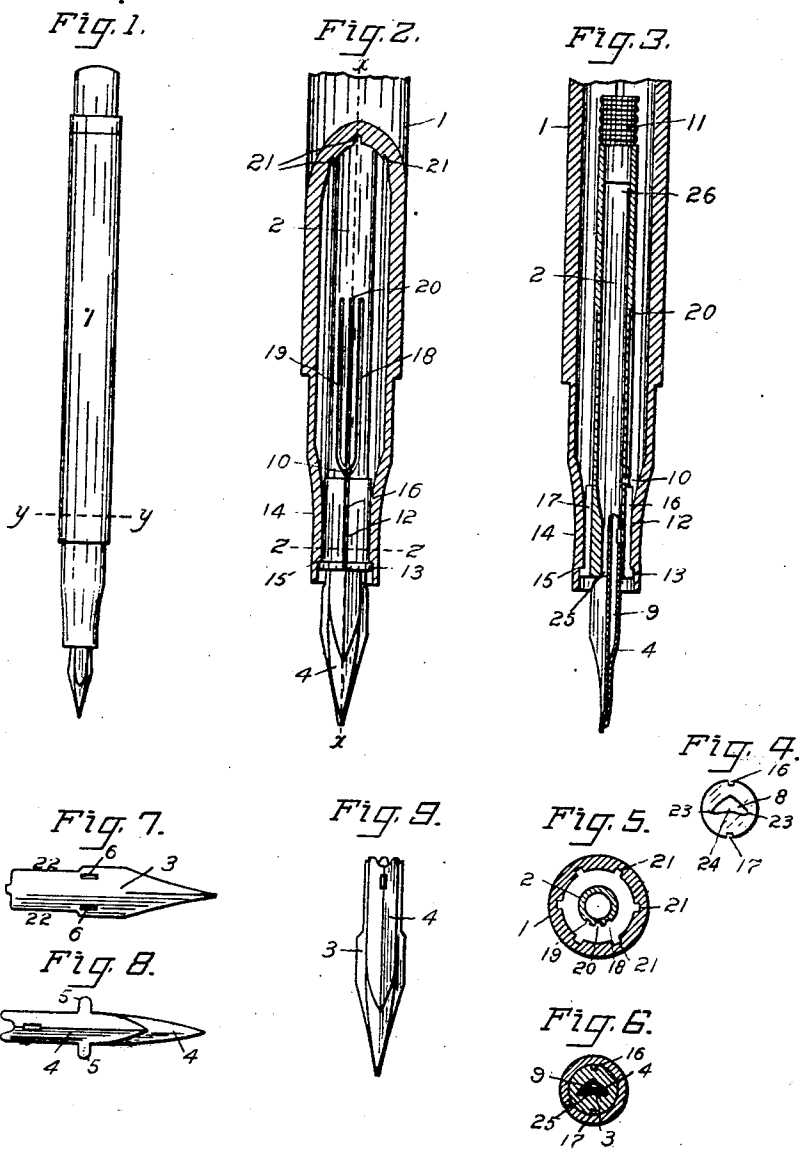
No. 677,008.

Patented June 25, 1901.

W. W. WINTON.
FOUNTAIN PEN.

Application filed Oct. 26, 1900.

(No Model.)



WITNESSES:
Geo. Gebatt.
J. N. Smoot

INVENTOR
Walter W. Winton
BY
D. S. Rappley
ATTORNEY

UNITED STATES PATENT OFFICE.

WALTER W. WINTON, OF SCRANTON, PENNSYLVANIA.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 677,008, dated June 25, 1901.

Application filed October 26, 1900. Serial No. 34,449. (No model.)

To all whom it may concern:

Be it known that I, WALTER W. WINTON, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to writing-pens in which the holder of the pen proper is designed to contain and furnish the supply of ink during the process of writing; and the objects of the invention are to prevent clogging by ink in such pens, to render the flow more certain, to simplify the process of filling, and increase the efficiency in general.

To this end the improvement consists in the construction, arrangement, and combination of the several parts herein set forth, and illustrated in the drawings, in which—

Figure 1 is a side elevation of one of my fountain-pens ready for writing. Fig. 2 is an enlarged view in which the holder is partly cut away and showing the relation and details of part of the interior of the device. Fig. 3 is an enlarged view in cross-section, taken on the line $x x$ of Fig. 2. Fig. 4 is an enlarged outer end view of the removable pen-socket used in the device. Fig. 5 is an enlarged view in cross-section, taken on the line $y y$ of Fig. 1. Fig. 6 is an enlarged view in cross-section, taken on the line $z z$ of Fig. 2. Fig. 7 is an enlarged detail view of the pen proper adapted to have a feed member secured to it. Fig. 8 is an enlarged detail view of a feed member adapted to be attached to the pen proper. Fig. 9 is an enlarged detail view of the pen and feed member joined together and ready for insertion into the pen-socket.

Similar characters of reference denote like and corresponding parts throughout the several views.

My pen consists, essentially, of four separate parts—the main ink-holding barrel 1, a hollow ink-holding supplemental barrel 2, adapted to be secured within the barrel 1, a pen 3, and a feed member 4, which latter are adapted to be fastened together by means of lugs 5 5, adapted to extend downward through the slots 6 6 and be bent upward on the under side of the pen, so as to hook the feed

member centrally over the convex surface of the pen 3, the two parts when thus united being adapted to be inserted into the pen-socket 8 in the lower end of the supplemental barrel 2, with the interior of which the feed of the pen thus secures communication. An open passage-way 9, which is constructed by an embossment in the feed, constitutes the principal source of supply of ink from the supplemental barrel 2 aforesaid. The supplemental barrel is provided with a small passage-way 10, communicating with the main barrel or ink-reservoir. The upper end of the supplemental barrel is sealed with a suitable plug 11. This need not be removed except for washing or cleaning. The lower end of the supplemental barrel is enlarged into a cylindrical portion 12, having a flange 13, adapted to close the contracted end 14 of the main barrel, the flange 13 resting on an annular seat 15 when pressed home. The cylindrical portion 12 is furrowed out at 16 and 17, being directly above and below, respectively, of the pen-holding socket 8. These furrows serve as air-passages when the pen is used. The inner convex surface of the main barrel and the outer convex surface of the supplemental barrel are chamfered or furrowed for the purpose of increasing the capillary action of the surface on the ink contained and for the further purpose of retaining moisture, so as to reinstate capillary action more readily where it has been suspended by partial drying. The chamfers or furrows, or some of them, as the furrows 18, 19, and 20 on the supplemental barrel, lead to the passage-way 10, connecting the main barrel with the supplemental barrel, and are adapted to deliver ink from the main barrel to the supplemental barrel during the operation of writing. The chamfers 21 of the interior of the main barrel may be as numerous as desired and may be either square-cornered, as shown, V-shaped, or semicircular. The pen when inserted into the pen's socket is adapted to have its edges 22 fit tightly into the angles 23 23 of the socket, and the space 25 between the upper surface 24 and the concave surface of the under side of the pen serves also as an air-passage to admit air into the supplemental barrel when the ink is fed out through the feed-passage 9 on the top of the pen.

The supplemental barrel, with the pen attached to it, is adapted to be easily removed from the main barrel by grasping the pen and feed with the thumb and finger and drawing the supplemental barrel longitudinally outward from the main barrel. The barrel may now be filled with ink to such a depth that when the supplemental barrel is reinserted the displacement thereby caused will not force the ink out of the main barrel. In the process of writing the ink from the main barrel passes through the passage-way or small bore 10 and begins filling up the supplemental barrel by first filling the passage-way 9, leading to the pen. While the pen is held in the writing position the supplemental barrel will fill some distance above the level of the passage-way 10, and as the main barrel empties into the supplemental barrel the ink is displaced by air which bubbles in through the furrows 16 and 17 and passes up to the upper end of the main barrel. Upon cessation of writing the pen should be placed in the pocket with the writing end upward, in which position the supplemental barrel will receive the ink remaining in it into its upper end 26 and displace enough air from said barrel, so that when writing is again undertaken the ink in the supplemental tube will fill considerably higher than at the first writing, and after several operations of changing the pen from one end to the other the supplemental barrel becomes filled with ink, the purpose being to provide an immediate and ready flow of ink for the feed-passage 9 at any moment when the pen is about to be used and for the further purpose of keeping the passage 10 moistened from either side, so as to prevent possible clogging from drying up. It is evident of course that the air-passage 25 serves the purpose of ink displacement in the supplemental barrel as occasion requires.

I do not wish to be confined to the exact

description of details as herein specified, as many of them may be varied without departing from the general spirit of my invention. 45

What I claim, and desire to secure by Letters Patent, is—

1. The herein-improved fountain-pen comprising a main ink-holding barrel, a supplemental ink-holding barrel adapted to be contained within said main barrel, a pen and feed adapted to be inserted within a socket in the end of said supplemental barrel, a feed-passage communicating between the pen and said supplemental barrel, and a passage in proximity to said feed-passage connecting the supplemental barrel with the main barrel, substantially as specified. 50 55 60

2. In a fountain-pen having a main ink-holding barrel and a supplemental ink-holding barrel, to which supplemental ink-holding barrel the pen-point is adapted to be attached, the combination with ink-passage leading from the main barrel to the supplemental barrel, of a furrowed or grooved surface exposed to the ink within the main barrel, some of said furrows leading to the passage into the supplemental barrel, substantially as specified. 65 70

3. A fountain-pen having air-vents, said pen comprising a barrel having internal furrows, and an ink-feeding device, the said internal furrows leading in the direction of the pen-point, and being in proximity to said air-passages and parallel therewith, for the purpose of increasing the capillary action and facilitating the feed, substantially as specified. 75 80

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

WALTER W. WINTON.

Witnesses:

D. G. MORAN,
JOHN KURTZ.