H. H. WRIGHT.

FOUNTAIN PEN.

APPLICATION FILED MAR. 11, 1908.

929,360. **Patented July 27, 1909.**

Fig. 1

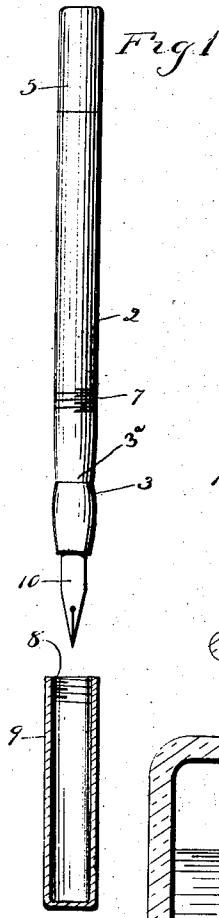


Fig. 2

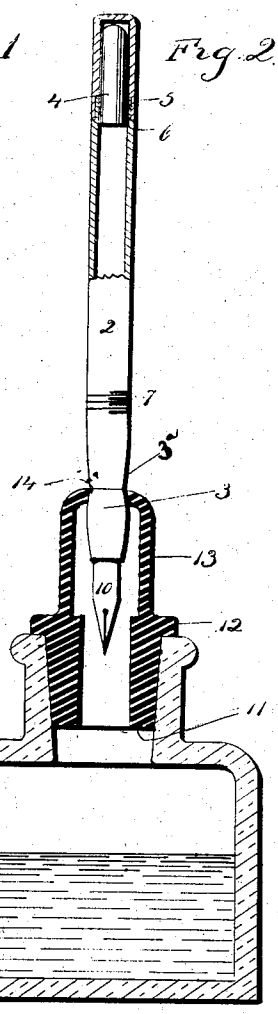


Fig. 3

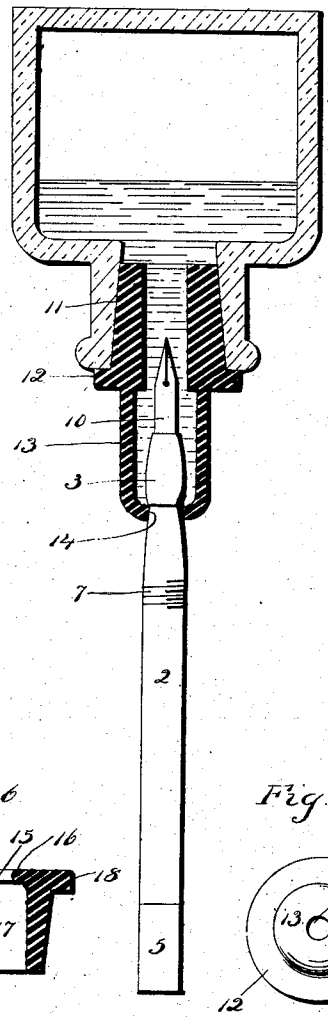


Fig. 4

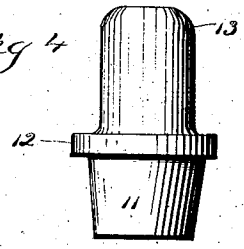


Fig. 6

Fig. 5

Witnesses
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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

No. 929,360. Specification of Letters Patent. Patented July 27, 1909.

Application filed March 11, 1908. Serial No. 420,378.

To all whom it may concern:

Be it known that I, HEATON H. WRIGHT, a citizen of the United States, residing at West Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Fountain-Pens; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in elevation of a pen constructed in accordance with my invention, its pen-cap being removed and shown in section. Fig. 2 a view showing the pen (with its pen-cap removed) applied to a cork formed in accordance with my invention and located in a small ink bottle. Fig. 3 a view showing the ink bottle upside down, with the pen in it, preparatory to filling the pen. Fig. 4 a detached view in elevation of the cork. Fig. 5 a plan view thereof. Fig. 6 a sectional view of one of the modified forms which the cork may assume.

My invention relates to an improved fountain-pen and to an ink-bottle cork for use in filling the same, the object being to produce a simple, cheap, convenient and effective pen having few parts and adapted to hold a relatively large quantity of ink and to provide an ink-bottle cork which not only permits the pen to be readily filled from any ordinary ink-bottle, but also provides for washing the pen proper at the same time.

With these ends in view my invention consists in a fountain pen and a filling-cork therefor, the said pen and cork having certain details of construction as will be hereinafter described and pointed out in the claim.

In carrying out my invention as herein shown, I provide the body 2 of the pen at its forward end with an enlargement 3 which also forms the pen-holder though this is not essential. The said enlargement 3 results in the production at its inner end or base of a constriction 3^a where it merges into the said body, the said constriction constituting a reduction of the body and enlargement in diameter below the greatest diameter of their contiguous portions. The said body 2 is made of hard rubber or equivalent material and provided at its upper end with a short flexible ink-sack 4 normally inclosed and protected by an ink-sack cap 5 fitting over the outer end of the body which is for this purpose reduced to form a sleeve 6. At its forward end the said body is provided with external screw threads 7 for co-action with the internal screw threads 8 of a pen-cap 9 a trifle larger in diameter than the body 3 and provided for inclosing and protecting the pen 10.

In conjunction with such a pen as above described, I employ a flexible pen-filling cork made in one piece and comprising a body 11, a flange 12 and a nipple 13, the latter being formed with a pen-receiving hole 14 a trifle smaller in diameter than the largest portion of the enlargement 3. Normally the hole 14 will be left open. As it is relatively small in area the evaporation of the ink on account of this exposure will be so small that it may be ignored. The body 11 of the cork will be adapted in size to fit any standard ink-bottle in which my improved cork will be used just as any cork is used except when its pen-receiving hole 14 is brought into play for filling a fountain-pen.

When it is desired to fill the pen, the pen-proper 10 and enlargement 3 are inserted into the nipple 13 of the cork through the hole 14. On account of its form the enlargement 3 will stretch the rubber surrounding the hole 14 sufficiently to permit the enlargement 3 to pass entirely into the nipple after which the flexible edges of the rubber will recover and form an ink-tight joint, either around the smaller upper portion of the enlargement 3 as shown in Fig. 2 or around the lower end of the body 2 where the same merges into the said enlargement 3 as shown in Fig. 3 of the drawings. In either event the rubber in recovering, enters the constriction 3^a in such a way as to prevent the pen from longitudinal movement in either direction unless sufficient force is applied to it in the longitudinal direction to cause the rubber edge to stretch and ride out of the constriction. The ink-bottle is then reversed as shown in Fig. 3, causing the ink to flow down into the body 11 and nipple 13 of the cork. The ink-sack is now squeezed to expel the air which is forced upward through the ink. When pressure is removed from the sack, ink will rush in through the pen 10 and enlargement 3 and take the place of the air thus expelled. This operation is repeated until the body 2 and sack 4 have been entirely filled with ink.

Then if the sack 4 is squeezed a portion of the ink will be forced back into the bottle only to rush back into the pen again, when pressure upon the sack is removed. By alternately squeezing and releasing the ink-sack in this manner after the pen has been filled, a body of ink will be forced back and forth through the enlargement 3 in such a way as to thoroughly wash the pen proper. The pen having been filled and the pen proper washed, the bottle is turned back to its upright position and the pen drawn away from the cork, at which time the flexible rubber surrounding the hole 14 will be stretched enough by the tapering upper portion of the enlargement 3 to permit the pen to be easily disengaged from the cork which will be left in the bottle to function there as a cork. If preferred the cork may be used as a special cork and for no other purpose than for filling fountain pens, but the most convenient way will be to use the cork just the same as though it were an ordinary cork. After the pen has been filled the cap 5 is applied to it for the protection of the ink-sack 4. I hardly need add that any fountain pen may be provided with an enlargement 3 to function with a cork having a pen-receiving hole functioning like the hole 14 in the cork. The employment, however, of the body 2 of a fountain pen for the reception of the ink has an advantage as the body will hold more ink than a long flexible ink-sack on account of its larger diameter. So far as my present invention is concerned, the flexible ink-sack need be no larger than is required to function as a means for expelling air from the pen.

Instead of constructing the cork as shown in Figs. 2, 3, 4 and 5, the nipple 13 might be dispensed with and a pen-receiving hole 15 with a flexible edge 16 formed close to the body 17 of the cork as shown in Fig. 6 in which the said hole 15 is formed in the same plane as the flange 18 of the cork. In any case, however, the flexible edge of the pen-receiving hole in the cork stands at a right angle to the longitudinal axis of the cork so as to be in position to enter the constriction at the base of the enlargement formed at the forward end of the body of the pen.

I claim:—

The combination with a fountain pen formed at its forward end with an enlargement and with a constriction at the base thereof and provided with a flexible ink sack projecting from its outer end, and with a cap for the protection of the said sack; of a cork having a pen-receiving hole formed with a flexible edge located in the plane of the top of the cork and entering the constriction at the base of the enlargement at the forward end of the body of the pen to form an ink-tight joint between the pen and the cork when the pen is to be filled, whereby by inserting the enlargement of the pen into the pen-receiving hole of the cork and turning the ink-bottle upside down and manipulating the ink sack the ink may be drawn from the bottle into the body of the pen.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

HEATON H. WRIGHT.

Witnesses:

GEORGE D. SEYMOUR,

CLARA L. WEED.