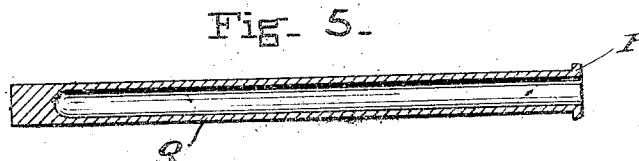
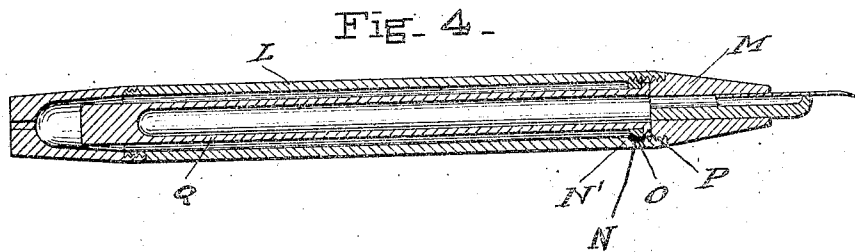
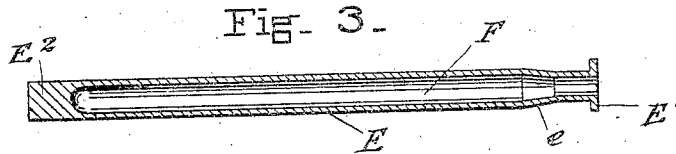
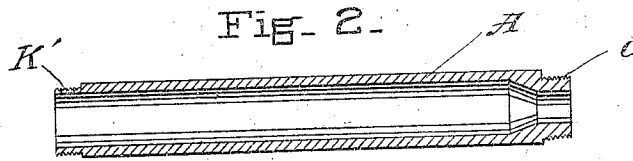
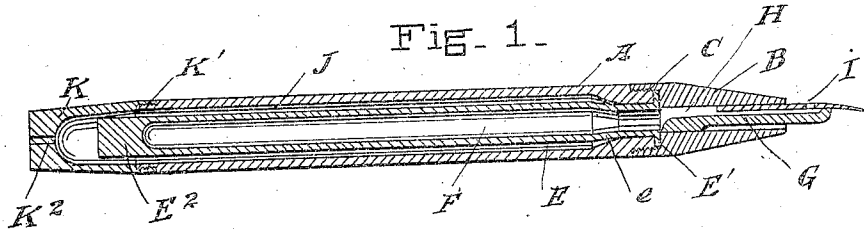


F. M. ASHLEY.
 FOUNTAIN PEN.
 APPLICATION FILED DEC. 3, 1906.

Patented Jan. 10, 1911.

980,899.



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FOUNTAIN-PEN.

980,899.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed December 3, 1906. Serial No. 345,877.

To all whom it may concern:

Be it known that I, FRANK M. ASHLEY, a citizen of the United States, residing at West Sixth street, corner of Dewey avenue, in the city of New York, borough of Brooklyn, Coney Island, State of New York, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

10 My invention relates to that type of self-filling fountain pens embodying a flexible sack for holding the ink, the construction being such that the closed end of said sack can be rendered accessible for permitting
15 the sack to be successively twisted and released, whereby a supply of ink can be inducted within the flexible reservoir presented by such sack.

The more prominent objects of the invention are to provide a pen of the character referred to, in which the open end of the sack is positively held against longitudinal movement in either direction, so that any tendency to leakage at the forward end of
25 the sack is obviated, and said sack be capable of undergoing the desired twisting movements without liability of its forward end becoming disengaged. Provision is also made whereby the sack at its open end
30 will be positively clamped between independent detachable sections of the pen, so that said clamped portion will serve as a packing for providing a liquid-tight joint between said sections.

35 There are other important features connected with the invention which in addition to those alluded to, are clearly explained in the subsequent detailed description.

In the accompanying drawing forming part
40 of this specification—Figure 1, is a longitudinal sectional view disclosing one form of my improved pen. Fig. 2, is a view of similar character, showing the casing-barrel detached. Fig. 3, is a longitudinal sectional view of the sack. Fig. 4, is a similar
45 view, disclosing a modification of the parts at the connection between the casing and the section holder. Fig. 5, is a sectional view of a sack adapted to be employed in connection with the structure disclosed in the preceding figure.

The parts are very simple and comprise a casing A, which is connected to a section-holder B, by a thread C, such connection
50 serving to clamp the flange E' of the flexible sack E, so that the open end of said sack

will be positively held against longitudinal movement or displacement in either direction, and the flange will act as a liquid-tight packing for the joint between the casing and the section holder.

In Figs. 1 and 3, the sack is shown as being provided near its front end, with a reduced portion e, which permits said sack at this point to twist more easily and thereby contribute to practically expel all the air from the reservoir or ink-chamber F, a result which cannot be so completely accomplished without the presence of said reduced portion e.

The section-holder is provided with the usual pen-section G, and pen I, said section containing the passage H, which establishes communication between the reservoir and the pen-point for the feed of ink, and successively with the atmosphere and an ink supply, when the air is to be expelled from said reservoir and ink inducted within the same.

The sack E, is provided at its rear end with a solid portion E², having the same diameter as that of the sack at its largest diameter, said solid portion being designed to serve as a handle for the fingers to grasp and manipulate the sack in the operation of filling. A further advantage in having the portion E², of the relative diameter described, is that in addition to said portion providing an appreciable handle to be grasped and manipulated by the fingers, as aforesaid, said portion by reason of its weight, will act as an anchor for maintaining the body of the sack properly disposed within the casing, irrespective of either the quantity within or entire absence of ink with respect to said sack. Furthermore, said portion E², will by reason of its relatively particular diameter, appreciably coact, after the sack has been twisted, to restore the same to its normal expanded condition.

The external diameter of the sack E, when the latter is filled with ink, is sufficiently less than the inner diameter of the casing as to result in an intermediate air passage or space J. The rear cap K, which is engaged with the casing at K', contains an air vent k², which permits the air within the space J, when heated or expanded by heat convection from the hand, to escape to the atmosphere, thereby preventing the pressure of the heated air from acting on the sack which is preferably of hard rubber, and the

forcing of ink from the reservoir through the passage H, which would cause what is termed in the trade, "flooding."

Referring to Fig. 4, the casing L, has at its forward end portion, a thread N, on its inner circumference instead of on its exterior as shown in Fig. 1, and the section-holder is provided with an exterior thread as disclosed. In order to provide an abutment for the rubber flange P, of the sack Q, the casing is threaded interiorly at its lower end to a point N' and a ring is threaded on its outer circumference to fit the thread in the casing into which it is screwed as shown, so that a flange of the sack may abut this ring and be held between it and the end of the pen section. The ring by reason of its internal diameter being smaller than that of the casing, providing a comparatively wide abutment for the flange P, to bear against, and when the section holder is engaged, both the flange and ring are positively held in position between the rear end of the section holder and the ring. The ring may, if desired, be formed integral with the casing instead of separable therefrom. Either the sack E or the sack Q, may be introduced and clamped between the casing L, and section-holder M, the only difference between the two sacks being that one is reduced in diameter at e, while the other is not so configured as most clearly appears in Fig. 5.

The pen is filled by successively twisting or otherwise collapsing the rubber sack, submerging the front end of the section-holder in an ink-supply, and releasing said sack, whereupon the ink will be drawn into the reservoir as the sack returns to its normal condition. It will be noted that the end portion E², of the sack, projects beyond the extremity of the casing proper, so that when the cap K is removed, said portion may be readily grasped to twist said sack.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. A fountain pen comprising a casing and a pen section, a flexible sack within the casing having a laterally extending flange which flange is clamped between the casing and pen section to hold the sack in position in the casing.

2. A fountain pen comprising a casing, a flexible sack within said casing and provided at its open end with a flange and at its closed end with a solid portion of a diameter substantially the same as that of the body of the sack under normal expansion, and a section holder which abuts and positively holds said sack by said flange to said casing to prevent its shifting longitudinally in either direction.

3. A fountain pen comprising a casing, a flexible sack within said casing, having a neck of reduced diameter and having a flange at its forward open end, and a section holder which abuts and positively holds said flange to said casing to prevent its shifting longitudinally in either direction.

4. A fountain pen comprising a casing, a flexible sack within said casing but of less external diameter than the casing interior, when said sack is normally expanded, said sack having a flange at its open end, a section holder which abuts and clamps said flange against the casing to hold the flange against movement longitudinally in either direction, and a rear cap for said casing, provided with a vent.

5. A fountain pen comprising a casing and a pen section, a flexible sack within the casing having a laterally extending flange, which flange extends between the end of the casing and pen section, and is clamped between the same thus serving as a packing at the joint and to hold the sack in said casing.

6. A fountain pen comprising a casing and a pen-section and means for securing the said section and casing together, one of said members having an extended shoulder thereon in alinement with the end of the other said member, and a sack adapted to hold ink and having a laterally extended flange interposed between said end and said shoulder.

In testimony whereof, I, FRANK M. ASHLEY, have signed my name to this specification in the presence of two subscribing witnesses, this 23rd day of December 1906.

FRANK M. ASHLEY.

Witnesses:

H. J. DORGELOH,
N. C. MILLER.