

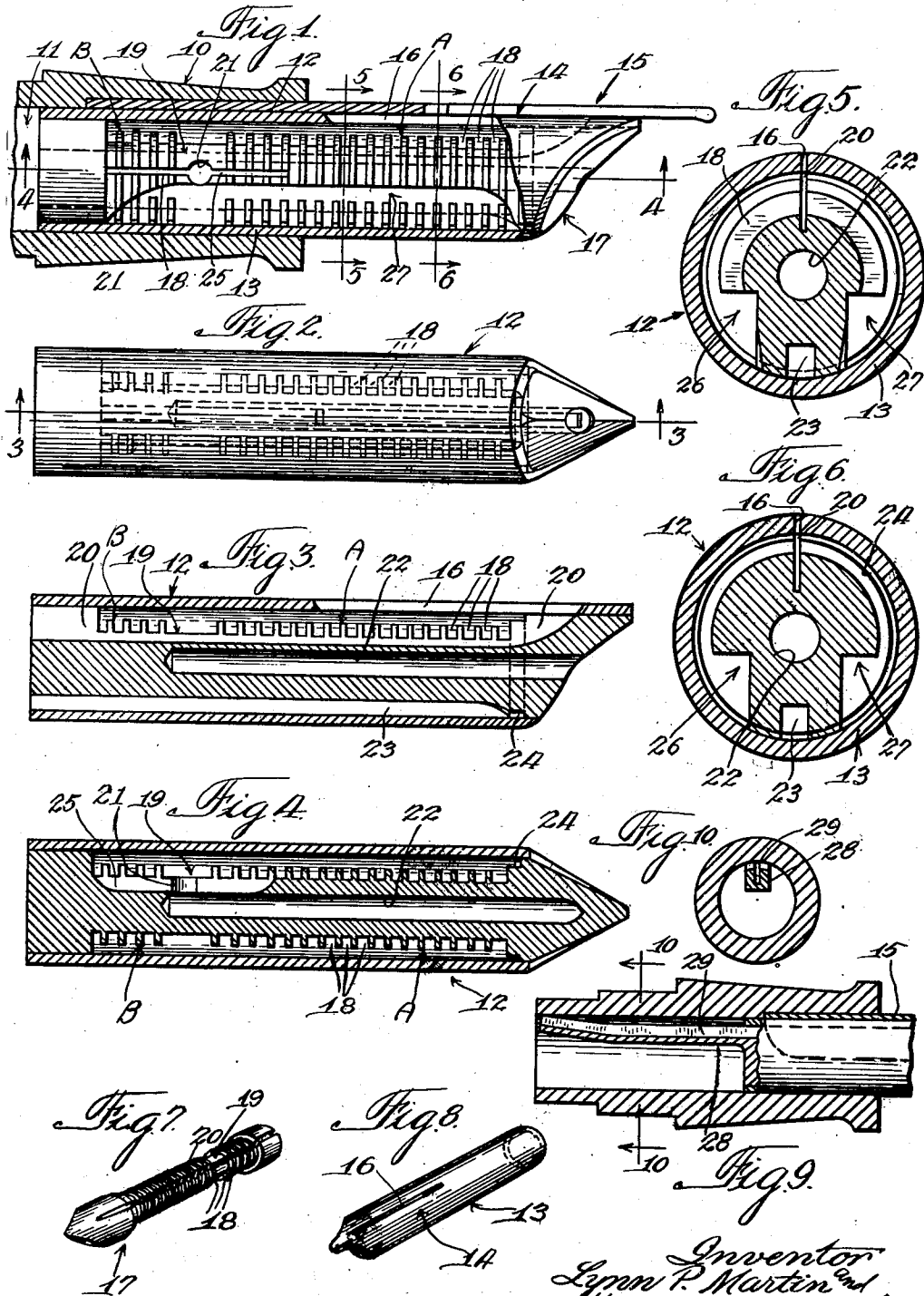
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FOUNTAIN PEN

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FOUNTAIN PEN

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This invention relates to a fountain pen and has special reference to the means for controlling the flow of the writing fluid from the reservoir of the fountain pen to the pen nib thereof.

More particularly, this invention relates to a fountain pen having a writing fluid reservoir and a pen section extending from one end thereof comprising a shell having a pen nib supporting portion and a core housed in the shell, the shell having a fissure therethrough on the pen nib supporting surface thereof and the core having a fissure on the periphery thereof communicating with the reservoir and with the shell fissure for directing fluid from the reservoir to the pen nib. The core is provided with capillary chambers and an aperture communicating therewith and with the atmosphere. Also, an air passage is provided in the core communicating at one end thereof with the reservoir and at the other end thereof with a capillary sealing channel in the core, the sealing channel having communication with the fissures of the shell and core and therethrough with the capillary chambers whereby the air passage is sealed when more than a normal amount of fluid is supplied to the fissures for writing, and air is admitted to the air passage when the sealing channel is exhausted to replace fluid in the reservoir for the normal supply of fluid to the fissures.

In the ordinary use of a fountain pen, writing fluid is fed by capillary attraction from the slit in the pen nib onto a writing surface. The fluid of a reservoir of a fountain pen is fed to the slit of the pen nib thereof through channels in the feed section, the slit and channels being of capillary dimensions. Ordinarily, the channels permit a supply of writing fluid to the writing surface in just sufficient quantity for normal use. However, during such conditions as, for example, when the reservoir of the fountain pen is partially exhausted of writing fluid, the heat from the hand in holding the fountain pen for writing will expand the air behind the remaining fluid and force through the channels an excess of the amount necessary for ordinary writing. In order to compensate for the excess supply of writing fluid fed to the pen nib it is usual to provide the feed section with storage chambers in communication with the feed ducts to relieve the feed ducts of the excess supply of writing fluid. The storage chambers are ordinarily of capillary dimensions and the attraction thereof for the writing fluid is greater than the action of gravity and prevents the fluid from dropping off the writing point end of the pen nib.

The present invention has for an object the provision of storage or expansion chambers in a feed for a fountain pen, the capacity of which is so great that only under the most-unusual conditions not contemplated in normal use might sufficient expansion occur within the reservoir to force fluid to drop from the pen nib. Under all conditions to which the fountain pen is subjected in normal use the present invention contemplates provision for the storage of any excess amount of fluid forced by expansion from the fluid reservoir. Tests have proven that the present construction will control excess fluid from expansion caused by a 60° temperature change.

Another object of this invention is to provide a separation of the fluid and air ducts in order that a more uniform flow of fluid may be had from the reservoir to the pen nib. In the following description it will be pointed out that a separate and definite path for fluid to flow from the fluid reservoir to the pen nib and for air to take the place of the fluid in the reservoir is had by new and novel structure. The path for the air supply to the reservoir is sealed when more than a sufficient amount of fluid is had in the feeding means for normal use in writing and the path is opened to permit a supply of fluid to flow from the reservoir to the feeding means when the seal is broken. No air is permitted to take the place of the writing fluid in the reservoir, for example, when writing fluid is present in the capillary chambers. Not until the fluid in the expansion chambers has been evacuated and the fluid forming the seal between the feed duct and air duct is in use will air be permitted to enter the reservoir. One of the advantages of separating the fluid and air ducts is to eliminate the pulsating effect so commonly found in fountain pens when the air passing to the reservoir to take the place of fluid therefrom forms bubbles which normally interrupt the continuous flow of fluid from the reservoir to the pen nib.

The present invention also contemplates the provision of an air vent in communication between the atmosphere and the capillary chambers. The core is provided with an internal longitudinally extending passage extending from one end thereof to a position near the other end thereof adjacent the inner end of the series of capillary chambers or, in the instance shown, transversely extending comb cuts. The provision of this air vent in such relation permits the filling of the fountain pen merely by immersing the tip end of the feeding means. The air vent permits the evacuation of air from the

capillary chambers as they become filled with fluid in excess of the amount needed for ordinary writing and provides an overflow in case the excess of fluid more than fills the capillary chambers. The surface tension of the bore of the vent also serves to augment the normal capacity of the chambers and the vent may be of capillary dimensions if desired.

The capillary chambers or, as has been illustrated in the drawing, the transversely extending comb cuts extend over a major portion of the peripheral surface of the case. A small number of comb cuts adjacent the reservoir end of the core is disconnected from the major portion thereof by a laterally extending peripheral channel of greater than capillary dimensions and the vent is in communication with this channel. As both sets of comb cuts are of capillary dimensions and the channel therebetween is not of capillary dimensions, writing fluid in excess of the amount necessary for normal writing would be accommodated in both sets of comb cuts before any fluid would be stored in the channel, capillary attraction being great enough to overcome the force of gravity which would normally fill the channel. The smaller number of comb cuts is also for the purpose of accommodating such expansion of writing fluid as may occur when the fountain pen is carried in the pocket with the writing point of the pen directed upwardly. An overflow into the vent would not occur in this condition until the small number of comb cuts are filled. Thus, in the writing condition and in the carried position, expansion of fluid from the reservoir of the fountain pen is accommodated and there is no condition where expansion cannot be accommodated.

Other objects and advantages of this invention will hereinafter be more particularly pointed out and, for a more complete understanding of the characteristic features of this invention, reference may now be had to the following description when taken together with the accompanying drawing, in which latter:

Figure 1 is a side elevational view partially in section of a pen section for a fountain pen embodying the features of this invention, the pen holder being shown fragmentarily in section;

Fig. 2 is a plan elevational view of the pen section of Fig. 1;

Fig. 3 is a central longitudinal sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 1, the pen holder and nib being omitted;

Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 1;

Fig. 6 is a transverse sectional view taken on the line 6—6 of Fig. 1;

Fig. 7 is a perspective view of the core element of the pen section shown in the preceding figures;

Fig. 8 is a perspective view of the shell element of the construction of the preceding figures;

Fig. 9 is a longitudinal sectional view partially in elevation of the pen section of the preceding figures showing a drain-back feature associated therewith; and

Fig. 10 is a sectional view taken on the line 10—10 of Fig. 9.

Referring now more particularly to the drawing, the fountain pen embodying the features of this invention comprises a holder 10 having a writing fluid reservoir 11 therein, a pen section

12 extending from the open end of the pen holder in communication with the fluid reservoir thereof.

The pen section comprises an outer shell 13 having a pen nib supporting surface or portion 14 on which a pen nib 15 rests. A fissure 16 is cut through the shell on the pen nib supporting surface and extends from a point adjacent the writing point end of the shell toward the holder therefor preferably at least a sufficient distance to extend beyond the end of the slit in the pen nib 15.

A core 17 preferably of circular cross section is housed within the shell 13, an intermediate portion of the core being of reduced cross section and being provided peripherally of the intermediate portion of reduced cross section with capillary chambers in the form of transversely extending comb cuts 18 of capillary dimensions. The ends of the core are of relatively enlarged cross section and are of such a size and shape preferably to snugly engage the bore of the shell. While the periphery of the core 17 and the bore of the shell 13 which it engages are, as above stated, preferably circular, it is to be understood that the configuration thereof may be changed without departing from the spirit of this invention.

The comb cuts 18 of capillary dimension are preferably of uniform size, the combs being separated into two series or sets A and B by a transversely extending peripheral channel 19 of greater than capillary dimensions. All of the comb cuts communicate with a fissure 20 extending longitudinally of the core for registration with the fissure 16 and for communication between the fluid reservoir 11 and the pen nib 15. The fissure 20 is narrow and of substantially smaller width than the width of the comb cuts 18 and thereby has a greater capillary attraction than the comb cuts. Fluid from the fluid reservoir 11 is attracted along the fissure 20 and thereby to the fissure 16 at the forward end thereof, with which the fissure 20 is in registration, to provide fluid to the slit of the pen nib 15. The slit in the pen nib 15 is likewise of capillary dimensions, being very narrow, and feeds fluid to the writing surface.

Should an expansion occur in the fluid reservoir for any reason and the fluid forced into the fissure 20 be in excess of the amount needed for writing, such excess amount is stored in the comb cuts 18 which are of capillary dimension. The attraction of the comb cuts is greater than the action of gravity and, therefore, the comb cuts are filled before the writing fluid will drop from the end of the pen nib. When all of the comb cuts 18 of the sets or series A and B are filled, fluid will overflow through the passage 21 extending angularly of the longitudinal axis of the insert into an axially extending aperture 22. The surface tension of the walls of the aperture 22 is also stronger than the forces of gravity and keeps the fluid from flowing out of the aperture until the extent of the surface of the aperture is exhausted. The axial aperture 22 communicates, therefore, with the atmosphere at the writing point end of the pen section, the other end communicating through the passage 21 with the comb cuts 18 and with the fissures 20 and 16.

In order that writing fluid be drawn from the fluid reservoir 11 to supply the pen nib in writing, it is necessary that air be admitted to the reservoir to take the place of the writing fluid

supplied therefrom. The fissure 20 which is the only means of communication between the reservoir and the writing fluid feeding mechanism is of very small width and, were air to pass in one direction through the fissure 20 to the reservoir to take the place of the fluid supplied to the fissure and therethrough to the writing nib, a pulsating effect would be obtained owing to the passage of the air bubble through the fissure to the reservoir. The flow of fluid through the fissure 20 would be momentarily stopped until the bubble of air has passed therethrough.

The above mentioned pulsating effect is not desirable in writing and it is, therefore, contemplated by this invention to provide a wholly independent path for the flow of the writing fluid. An air passage 23 is cut in the periphery of the core 17, the passage extending longitudinally from the juncture of the reduced portion of the core at the writing point end thereof with the relatively enlarged portion thereof through to the opposite end for communication with the fluid reservoir 11. The only communication had between the air passage 23 and the remaining fluid feeding portions of the pen section is provided by a sealing means in the form of a capillary channel comprising an undercut 24 at the juncture of the relatively reduced and enlarged portions of the core at the writing point end thereof. The undercut or capillary channel 24 communicates with the fissures 16 and 20 and through the latter fissure with the comb cuts 18.

In the operation of the feeding mechanism of the pen section thus described the normal path of the fluid in writing is from the fluid reservoir 11 through the fissure 20 to the fissure 16 of the shell and to the slit of the pen nib 15 resting on the supporting portion of the shell. Should expansion occur in the fluid reservoir and fluid pass through the fissure 20 in excess of the amount needed for writing, such excess fluid is attracted first into the undercut 24 and thereafter into the comb cuts 18 and, the attraction of the comb cuts being greater than the action of gravity, all of the comb cuts are filled before writing fluid will drop from the point of the pen. If the amount of excess fluid is greater than the capacity of the comb cuts, such excess will pass through the passage 21 into the axial aperture 22 and the surface tension of the walls of the passage and aperture is sufficient to overcome the force of gravity to keep the fluid from flowing out of the aperture until the extent of the surfaces thereof is exhausted. However, after the peak of expansion has been reached, which ordinarily occurs long prior to the time that the comb cuts are completely filled, continued writing will gradually draw the fluid from the expansion chambers thus provided by the comb cuts and, when all of the comb cuts are empty, continued writing fluid will be normally supplied through the fissure 20.

During normal writing and after the fissures 20 and 16 are filled with fluid, the capillary channel 24, which is of smaller dimension than the comb cuts 18, is supplied with fluid to form a liquid seal before fluid can be fed to the comb cuts 18. The fluid in the fissures 16 and 20 is never exhausted in normal writing and air is continuously fed to the reservoir through the passage 23. The air supply is cut off only when an excess amount of fluid due to expansion or the like is present in the sealing channel or in both the sealing channel and comb cuts whereafter the comb cuts are evacuated first and there-

after the fluid in the capillary channel is fed to the fissures. The sealing means provided by the undercut is thus broken to permit air to move toward the fluid reservoir 11 through the air channel 23 in the normal manner. This operation is repeated as long as the pen is used under normal writing conditions and until expansion in the fluid reservoir again takes place. At no time when the comb cuts 18 are filled with an excess supply of writing fluid will any air be permitted to pass through the air passage 23 and, thus, no writing fluid in the reservoir will be permitted to be drawn therefrom.

The air vent 22, besides its described use as an overflow duct, permits the exhaust of air from the comb cuts as they are supplied with the fluid in excess of the amount necessary in normal writing. This excess supply of fluid builds up from the writing point end of the feeding means when the fountain pen is held in position in writing. The overflow duct 21 communicating between the channel 19 and the vent 22 is as above stated between the sets of capillary chambers or cross cuts A and B. This is desirable since there may be a condition, as when carried with the writing point directed upwardly, when there is an expansion of fluid from the reservoir. If the overflow duct 21 were immediately adjacent the ends of the comb cuts and the reservoir was absolutely full, there would be no accommodation for expansion and the fluid would be forced into the vent. In the present arrangement any expansion within normal limits will be accommodated.

It may also be desirable to afford a capillary communication between the sets A and B of comb cuts and such means is shown in the form of a fissure 25 extending longitudinally on each side of the channel 19. The channel preferably intersects the overflow duct 21 and extends to the vent 22 for communication therewith. Further, a peripheral portion of the core is preferably cut away as at 26 and 27 on opposite sides of the air passage 23 to permit a somewhat free flow of air or fluid or both between the core and the casing 13. The fissure 25, aside from affording a capillary communication between the sets A and B of comb cuts, has the further function of serving to draw fluid from the vent 22 into the expansion chambers. Should a condition exist wherein fluid overflows into the vent 22, such overflow is attracted back into the expansion chambers for communication to the pen nib in writing or to the reservoir for storage. Providing such a capillary fissure 25 prevents overflow in the vent 22 from escaping through the open end thereof to blot the writing surface.

Referring now more particularly to Figs. 9 and 10, an extension 28 may preferably be formed integrally with the core 17 on the inner end thereof, the extension being of reduced cross section and having a groove 29 extending longitudinally on a peripheral portion thereof. The extension is directed upwardly to contact with a wall of the fluid reservoir 11 into which it extends. The groove 29 is preferably of capillary dimensions and is coextensive with the fissure 20 in the main body portion of the core. The extension is employed in one position of the fountain pen to drain the fluid from the fluid feeding means back into the reservoir and is also employed to direct, by capillary attraction, fluid from the reservoir to the feeding means in the outer portion of the fountain pen.

While but a single embodiment of this invention is herein shown and described, it is to be understood that various modifications thereof may be apparent to those skilled in the art without departing from the spirit and scope of this invention and, therefore, the same is only to be limited by the scope of the prior art and the appended claims.

We claim:

1. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure of capillary dimensions on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, a capillary channel and capillary chambers in said pen section for holding the fluid in excess of the amount necessary for supplying said fissures, and an air passage in said core in communication with said reservoir and with said capillary channel, said channel having communication with said fissures and said capillary chambers whereby said air passage is sealed when said channel is supplied with fluid, and air is admitted to said air passage when the seal of said channel is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

2. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure of capillary dimensions on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, a capillary groove and capillary chambers disposed peripherally of said core for holding the fluid in excess of the amount necessary for supplying said fissures, and an air passage in said core in communication with said reservoir and with said capillary groove, said groove having communication with said fissures and said capillary chambers whereby said air passage is sealed when said groove is supplied with fluid, and air is admitted to said air passage when the seal of said groove is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

3. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and in registration with said shell fissure for directing fluid from said reservoir to the pen nib, said core being of reduced cross section over an internal peripheral portion thereof providing an undercut of capillary dimensions with respect to the bore of said shell, capillary chambers disposed peripherally of said core communicating with said fissures, and a longitudinally extending air passage in said core in communication with said reservoir and with said peripheral undercut, said undercut having communication with said fissures and with said capillary chambers whereby said air passage is sealed when said undercut is supplied with fluid,

and air is admitted to said air passage when the seal of said undercut is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

4. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and in registration with said shell fissure for directing fluid from said reservoir to the pen nib, capillary chambers disposed peripherally of said core over an intermediate portion thereof, said core being of reduced cross section adjacent one end of said capillary chambers to provide an undercut of capillary dimensions with respect to the bore of said shell, said undercut and said chambers communicating with said fissures, said core having an internal aperture communicating with the atmosphere at the writing point end of said pen section and with a passage extending for communication with said capillary chambers, and a longitudinally extending air passage in said core in communication with said reservoir and with said undercut, said undercut having communication with said fissures and with said capillary chambers whereby said air passage is sealed when said undercut is supplied with fluid, and air is admitted to said air passage when the seal of said undercut is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

5. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and in registration with said shell fissure for directing fluid from said reservoir to the pen nib, transversely extending comb cuts of capillary dimensions disposed peripherally of said core over an intermediate portion thereof, said core being of reduced cross section adjacent one end of said comb cuts to provide an undercut of capillary dimensions with respect to the bore of said shell, said undercut and said chambers communicating with said fissures, said core having an axial aperture communicating with the atmosphere at the writing point end of said pen section and with a passage extending for communication with the comb cuts, and a longitudinally extending air passage in said core in communication with said reservoir and said undercut, said undercut having communication with said fissures and with said comb cuts whereby said air passage is sealed when said undercut is supplied with fluid, and air is admitted to said air passage when the seal of said undercut is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

6. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising an open-ended shell having a pen nib supporting portion, a core having an intermediate portion of reduced cross section with the end portions engaging the bore of said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof

communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, a shoulder at one end of the portion of said core of reduced cross section forming a channel of capillary dimensions with respect to the bore of said shell, capillary chambers disposed peripherally of the portion of reduced cross section of said core, said core having an aperture in communication between the atmosphere at the writing point end of said pen section and said capillary chambers, and an air passage in said core communicating with said reservoir and with said capillary channel, said channel having communication with said fissures and with said capillary chambers whereby said air passage is sealed when said channel is supplied with fluid, and air is admitted to said air passage when the seal of said channel is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

7. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising an open-ended shell having a pen nib supporting portion, a core having an intermediate portion of reduced cross section with the end portions engaging the bore of said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, a capillary channel and transversely extending comb cuts of capillary dimensions disposed peripherally of the portion of reduced cross section of said core, said core having an aperture communicating with the atmosphere at the writing point end of said pen section and with the comb cuts intermediate the ends thereof, and a longitudinally extending air passage in said core communicating with said reservoir and with said capillary channel, said channel having communication with said fissures and with said comb cuts whereby said air passage is sealed when said channel is supplied with fluid, and air is admitted to said air passage when the seal of said channel is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

8. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising an open-ended shell of uniform diameter throughout and having a pen nib supporting portion, a core having an intermediate portion of reduced cross section with the end portions engaging the bore of said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, capillary chambers disposed peripherally of said core over the portion thereof of reduced cross section, said core having an aperture communicating with the atmosphere at the writing point end of said pen section and with said capillary chambers, a shoulder adjacent one end of said reduced portion forming a capillary groove with respect to said shell, and an air passage in said core communicating with said reservoir and with said capillary groove, said groove having communication with said fissures and with said chambers whereby said air passage is sealed when said channel is supplied with fluid, and air is admitted to said air pas-

sage when the seal of said channel is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

9. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising an open-ended shell having a pen nib supporting portion, a core having an intermediate portion of reduced cross section with the end portions engaging the bore of said shell, said shell having a fissure therethrough on the pen nib supporting surface thereof and said core having a fissure on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, transversely extending comb cuts of capillary dimensions disposed peripherally of said reduced cross section of said core, said core having an axial aperture communicating with the atmosphere at the writing point end of said pen section and with a passage extending transversely of the axis of said core for communication with the comb cuts adjacent the other end thereof, and a longitudinally extending air passage in said core communicating at one end thereof with said reservoir and at the other end thereof with a peripheral undercut in said core at the shoulder formed by the junction of the portion of reduced cross section thereof, said undercut having communication with said fissures and with said comb cuts whereby said air passage is sealed when said undercut is supplied with fluid and air is admitted to said air passage when the seal of said undercut is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissures.

10. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof comprising a shell having a pen nib supporting portion, a core housed in said shell, said shell having a fissure therethrough over a portion of the pen nib supporting surface thereof and said core having a fissure of capillary dimensions on the periphery thereof communicating with said reservoir and with said shell fissure for directing fluid from said reservoir to the pen nib, capillary chambers disposed peripherally of said core, said core having an aperture communicating with the atmosphere and with said capillary chambers, an air passage in said core communicating at one end thereof with said reservoir, and sealing means on said core for the other end of said air passage, said sealing means being operative to seal said air passage when the supply of fluid from the reservoir is in excess of the amount required by said fissures, and being operative to permit a passage of air to said air passage when the supply of fluid from said reservoir to said fissures is in the amount required by said fissures to replace fluid in said reservoir for the further supply of fluid to said fissures.

11. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell and a core housed in said shell, said core having a fissure of capillary dimensions communicating between said reservoir and said pen nib for supplying writing fluid thereto, a capillary channel in said pen section for receiving fluid from said reservoir in excess of the amount necessary for supplying said fissure, and an air passage in said core in communication with said reservoir and said capillary channel, said channel having communication with said fissure whereby said air passage is sealed when said channel is supplied with fluid, and air is ad-

mitted to said air passage when the seal of said channel is broken to replace fluid in said reservoir for the further supply of fluid therefrom to said fissure.

12. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, capillary chambers disposed peripherally of said core, a fissure of capillary dimensions extending longitudinally of said core intersecting said capillary chambers and communicating between said reservoir and said pen nib for the supply of fluid to a writing surface, and an air duct in said core communicating with said reservoir and extending therefrom in the direction of the writing point end of said pen section, and sealing means between said air duct and said fissure and capillary chambers to govern the supply of air to said reservoir for the control of fluid therefrom to said fissure.

13. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, means for supplying writing fluid from said reservoir to said pen nib, sets of capillary chambers disposed peripherally of said core for receiving any excess of fluid from said supplying means, said sets being spaced by a channel of greater than capillary dimensions, and an air vent communicating between the outside atmosphere and said channel.

14. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, means for supplying writing fluid from said reservoir to said pen nib, spaced sets of capillary transversely extending comb cuts disposed peripherally of said core for receiving any excess of fluid from said supplying means, and an air vent extending internally through said core and communicating between the outside atmosphere and the space between said sets of capillary chambers.

15. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell of substantially uniform internal diameter having a core housed therein, said core having an intermediate portion of reduced cross section, means for supplying writing fluid from said reservoir to said pen nib, spaced sets of capillary chambers disposed peripherally of the reduced portion of said core for receiving any excess of fluid from said supplying means, and an air vent extending internally through said core and communicating between the outside atmosphere and the space between said sets of capillary chambers.

16. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, means for supplying writing fluid from said reser-

voir to said pen nib, spaced sets of capillary comb cuts disposed peripherally of said core for receiving any excess of fluid from said supplying means, a fissure in said core intersecting capillary comb cuts of both sets providing communication therebetween, and an air vent communicating between the outside atmosphere and the space between said sets of capillary chambers.

17. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, capillary chambers disposed peripherally of said core, a fissure extending longitudinally of said core intersecting said capillary chambers and communicating between said reservoir and said pen nib for the supply of fluid to a writing surface, a reduced extension on said core extending beyond the confines of said shell into said reservoir, and a fissure in said extension coextensive with said core fissure for directing a supply of writing fluid from said reservoir to said core fissure during normal use in writing and for draining said core fissure of fluid during normal condition of non-use.

18. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell of substantially uniform diameter internally thereof having a core housed therein, said core having an intermediate portion of reduced cross section, capillary chambers disposed peripherally of said core, over the reduced portion thereof, a fissure extending longitudinally of said core intersecting said capillary chambers and communicating between said reservoir and said pen nib for the supply of fluid to a writing surface, an air duct extending longitudinally over a peripheral portion of said core in communication with said reservoir, sealing means between said air duct and said fissure and capillary chambers to govern the supply of air to said reservoir for the control of fluid therefrom to said fissure, and cut-away portions on each side of said air duct peripherally of said core intersecting said capillary chambers.

19. In a fountain pen, a writing fluid reservoir, a pen section extending from one end thereof for supporting a pen nib, said pen section comprising a shell having a core housed therein, capillary chambers disposed peripherally of said core, a fissure extending longitudinally of said core over a peripheral portion thereof intersecting said capillary chambers and communicating between said reservoir and said pen nib for the supply of fluid to a writing surface, and an air duct disposed peripherally of said core in a spaced relation from said fissure and capillary chambers communicating with said reservoir and extending therefrom in the direction of the writing point end of said pen section, and means for establishing a controlled communication between said air duct and said fissure and capillary chambers.

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