Oct. 9, 1923. 1,469,921

J. DUTCHAK

FOUNTAIN PEN

Filed Sept. 21, 1922

FIG. 1.

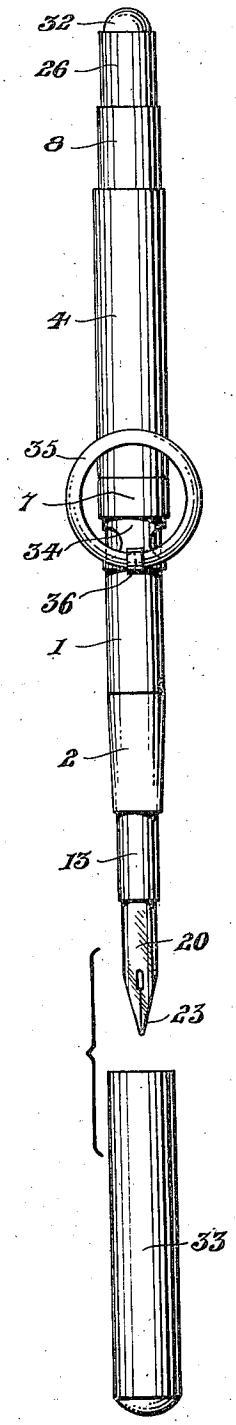


FIG. 2.

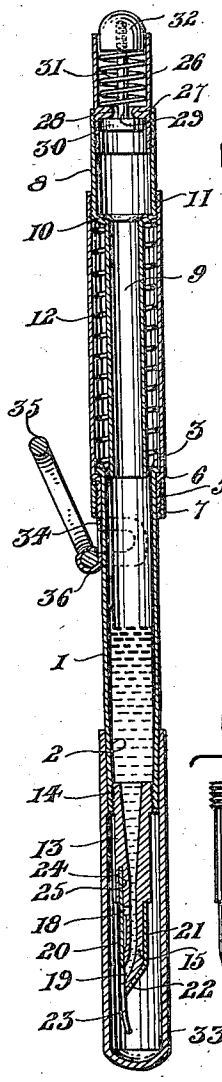


FIG. 3.

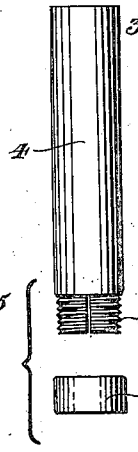


FIG. 4.

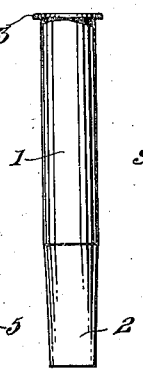


FIG. 5.

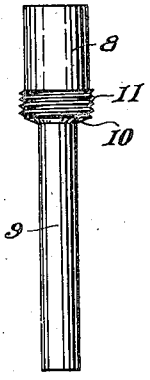


FIG. 6.

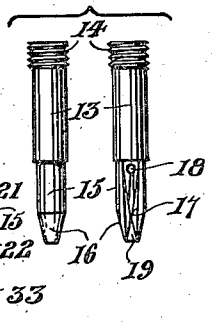


FIG. 7.

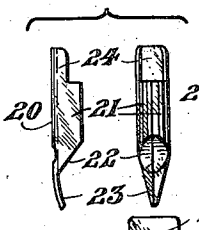
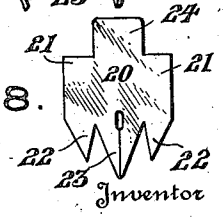


FIG. 8.



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UNITED STATES PATENT OFFICE.

JOHN DUTCHAK, OF HYDE PARK, MASSACHUSETTS.

FOUNTAIN PEN.

Application filed September 21, 1922. Serial No. 589,577.

To all whom it may concern:

Be it known that I, JOHN DUTCHAK, a citizen of Ukraine, residing at Hyde Park, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fountain Pens, of which the following is a specification.

This invention relates to certain new and useful improvements in fountain pens and has particular reference to a fountain pen of the self-filling type wherein the tensioned sliding and telescoping section of the pen is adapted for operation during the filling of the pen.

A further object of the invention is to provide in a fountain pen of the type above set forth, the provision of means to promote the proper flow of ink from the pen and preventing the coagulation of ink at the point thereof.

With the above general objects in view and others that will appear as the nature of the invention is better understood, the same consists of the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing, wherein like reference characters designate corresponding parts throughout the several views,

Figure 1 is a side elevational view of a fountain pen constructed in accordance with the present invention showing the finger rest detachably connected thereto,

Figure 2 is a longitudinal sectional view of the pen showing the tensioned telescoping sections, and the tensioned plunger for promoting the proper flow of ink from the pen,

Figure 3 shows side elevational views of the tensioned sliding casing and the enclosing collar for the lower end thereof,

Figure 4 is a side elevational view of the reservoir or barrel,

Figure 5 is a side elevational view of the tensioned plunger associated with the sliding casing,

Figure 6 shows two side elevational views of the removable ink feeding end of the pen,

Figure 7 shows side and rear elevational views of the pen point, and

Figure 8 is a developed plan view of the blank from which the pen point is formed.

Referring more in detail to the accompanying drawing, there is illustrated a fountain pen embodying a reservoir or tubular barrel section 1 having a slightly tapered inner end 2 and an outwardly directed annular flange 3 formed at the outer end thereof as clearly shown in Figs. 2 and 4. A tubular casing 4 is slidably mounted upon the barrel section 1, the same having a reduced externally threaded inner end 5 defining an internal shoulder 6 that is engaged by the outwardly directed flange 3 upon the barrel section 1 as shown in Fig. 2, the reduced threaded inner end 5 of the tubular casing 4 receiving the collar 7 to provide the proper frictional engagement between the tubular casing and barrel. A tubular plunger rod section embodies an upper enlarged end 8 carrying a relatively long depending tubular stem 9 defining a shoulder 10 at the inner end of the upper enlarged section 8, while said section is externally threaded as at 11 as clearly shown in Fig. 5. The upper end of the tubular casing 4 is internally threaded as illustrated in Fig. 2 for engagement with the threads 11 upon the tubular stem section, the parts when assembled presenting the stem section 9 in the position illustrated in Fig. 2 for telescopic reception in the reservoir or barrel 1. To hold the tubular casing 4 at its limit of outward movement as shown in Fig. 2, with the flange 3 upon the barrel engaging the shoulder 6 upon the tubular casing, a coil spring 12 surrounds the tubular stem 9, engaging at its upper end the shoulder 10 while the lower end thereof engages the flange 3 upon the barrel.

The tip of the fountain pen includes a tubular section 13 externally threaded at its upper end as at 14 for engagement with internal threads formed at the inner ends of the barrel 1, the other end of the tubular section 13 being reduced as at 15, terminally tapered as at 16 and having one side of the reduced end 15 grooved as at 17 with spaced openings 18 and 19 provided in the bottom wall of the groove and communicating with the bore of the tubular section 13 as illustrated in Fig. 2.

The pen point associated with the tip 13 is formed from the blank 20, shown in Fig. 8, of substantially rectangular formation in plan view, the blank embodying side wings 21, depending side pointed sections 22 and a central slitted depending pointed section 23 constituting the writing point of the pen. An extension 24 is carried by the upper edge of the blank 20, and when the blank is bent into circular formation, as shown in

Fig. 7, the edges of the side sections 21 are moved into engagement, while the outer edges of the point 22 engage each other to constitute an ink pocket in the body portion of the pen point. The curved extension 24 carried by the blank is received in the groove 25 provided in the tubular section 13 adjacent the reduced end 15 while the circular portion of the pen point encloses the reduced end 15 as shown in Fig. 2.

The upper end of the tubular section 8 has a sleeve 26 internally threaded therein as illustrated in Fig. 2, said sleeve carrying an inwardly directed annular flange 27 defining a central opening 28 through which a stem 29 slidably extends, the inner end of said stem carrying a disk head 30 spaced inwardly of said flange and forming a closure for the opening 28, the disk being retained in engagement with said flange by the coil spring 31 surrounding the stem 29, engaging the flange at its inner end and engaging the button head 32 secured to the outer end of the stem. A closure cap 33 frictionally engages the tapered end 2 of the barrel 1 to protect the pen point 20.

A finger rest or support is associated with the barrel 1 and includes a spring clip 34 carrying a ring 35 that is pivoted to the clip as at 36, the index finger of the hand being positioned in the ring for freely supporting the pen and permitting ready movement thereof during the act of writing.

From the above detail description of the device, it is believed that the construction and operation thereof will at once be apparent, it being noted that when it is desired to fill the barrel 1 with ink, the point 20 is dipped into a well and the tubular casing 4 and stem 9 pressed inwardly against the tension of the spring 12 to exhaust air from the barrel 1 through the openings in the reduced end 15 of the pen tip 13, the return of the casing and stem to their normal positions drawing ink into said barrel. Should the discharge openings 18 and 19 in the tip be clogged by ink, or should the ink fail to feed to the point properly, reciprocations of the stem 29 by pressing upon the button head 32 will cause the air in the upper end of the barrel 1 and stem 9 to be compressed for forcibly ejecting said ink and clearing the opening. The particular type of pen point employed in connection with the pen provides a bowl in the body portion thereof that constitutes an ink receptacle insuring the proper feeding of the ink to the writing point while the finger support facilitates ready handling of the pen with unrestricted movement thereof during the act of writing.

While there is herein shown and described the preferred embodiment of the present invention it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What is claimed as new is:—

1. In a fountain pen of the type described, a barrel, a tubular plunger stem resiliently supported thereon, a tip removably carried by the inner end of the barrel, a pen point positioned in the tip, a tubular casing secured to the stem inclosing a portion of the barrel and slidable thereon, a sleeve carried by the outer end of the stem, and a tensioned plunger rod associated with the sleeve.

2. In a fountain pen of the type described, a barrel, a tubular plunger stem resiliently supported thereon, a tip removably carried by the inner end of the barrel, a pen point positioned in the tip, a tubular casing secured to the stem inclosing a portion of the barrel and slidable thereon, a sleeve carried by the outer end of the stem, a tensioned plunger rod associated with the sleeve, and cooperating means carried by the barrel and casing for limiting the separating movements of the barrel and casing.

3. In a fountain pen of the type described, a barrel, a tubular plunger stem resiliently supported thereon, a tip removably carried by the inner end of the barrel, a pen point positioned in the tip, a tubular casing secured to the stem inclosing a portion of the barrel and slidable thereon, a sleeve rigidly secured to the outer end of the stem, an apertured flange formed internally of the sleeve, a tensioned plunger rod extending through said aperture, and a disk head carried by the inner end of the rod for closing said aperture.

4. In a fountain pen of the type described, a barrel, a tip carried by one end thereof, resilient means slidably associated with said barrel for drawing ink therein through said tip, and tensioned reciprocating means carried by the aforesaid means for forcing ink through the tip.

In testimony whereof I affix my signature.

JOHN DUTCHAK.