Aug. 14, 1945. M. GERGELY 2,381,898

CARTRIDGE FOUNTAIN PEN

Filed June 29, 1943

Fig. 1.

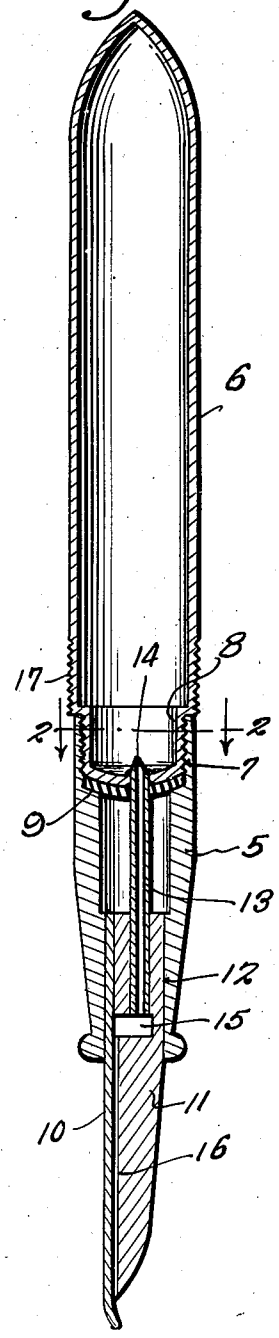


Fig. 4.

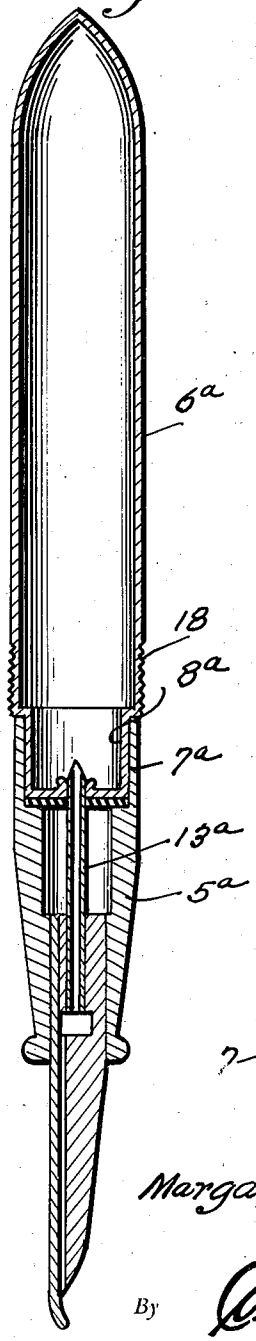


Fig. 3.

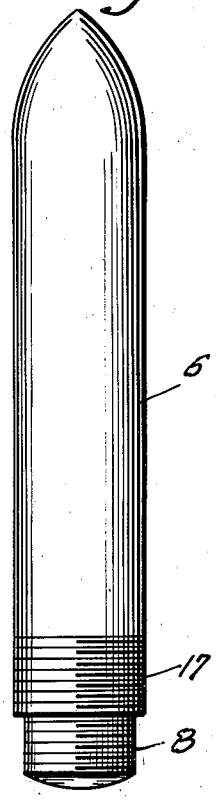
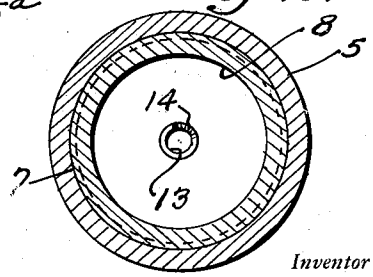


Fig. 2.



Inventor

Margaret Gergely

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

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CARTRIDGE FOUNTAIN PEN

Margaret Gergely, Waltz, Mich.

Application June 29, 1943, Serial No. 492,736

1 Claim. (Cl. 120—42)

This invention relates to new and useful improvements in fountain pens and more particularly to fountain pens of the readily replaceable ink supply type.

The principal object of the present invention is to provide a fountain pen which broadly consists of a pen point holder section and a replaceable ink cartridge, with rupturing means on the pen point holding section for rupturing the container in order that ink can move to the pen point.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawing:

Figure 1 represents a longitudinal sectional view through the improved pen showing the screw type cartridge.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a side elevational view of the cartridge.

Figure 4 is a longitudinal sectional view through a slip type cartridge.

Referring to the drawing wherein like numerals designate like parts, it can be seen in Figure 1, that numeral 5 denotes a pen point holding section, while numeral 6 denotes a cartridge for containing ink, this cartridge being readily replaceable and preferably of plastic or some other inexpensive material. The material of the cartridge 6 is preferably transparent.

The section 5 has a threaded bore 7 in one end thereof for receiving a threaded reduced extension 8 of the cartridge 6. A packing member 9 is provided and suitably seated at the inner end of the threaded bore 7.

Figure 1 further shows a pen point 10 and a feeder plug 11 which is disposed into a bore 12, and this feeder plug 11 has a tubular punch 13 extending from its inner end and capable of rupturing the reduced end portion 8 of the cartridge 6 when the cartridge 6 is screwed into the socket 7, it being shown that the inner end of the tube 13 is sharpened as at 14.

Thus it can be seen that when the cartridge has been ruptured, ink can flow through the tube 13 to a small pocket 15 in the feeder plug 11 and from there by way of the usual channel 16 to the tip of the pen point 10.

Figure 4 shows a slightly modified form of the invention, reference character 6a denoting a cartridge and this has a reduced smooth extension 8a which is adapted to be slipped into a smooth bore 7a in a pen point holding section 5a, this section having a tubular punch 13a capable of rupturing the reduced portion 8a of the cartridge 6a when the cartridge is forced into connection with the section 5a.

As can be seen in the drawing, the forms of the invention shown in Figures 1 and 4 have threads 17 and 18 at the inner end portions of the cartridge so as to accommodate fountain pen covers (not shown).

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

A fountain pen comprising a tubular pen point holding section having a counterbore at its upper end to provide an internal annular shoulder, an ink cartridge forming the handle of the pen and having a reduced normally closed cylindrical lower end removably fitted and retained in said counter-bore, a packing washer seated on said shoulder and engaged by the lower end of the cartridge, a pen point and a feeder plug having their upper ends disposed in the lower portion of the pen point holding section, said feeder plug having an axial bore in its upper portion, a pocket intermediate its ends communicating with the lower end of said axial bore, and a longitudinal ink channel at the inner side of the pen point extending from the pocket to the lower end of the feeder plug, and a cylindrical tubular punch having its lower end fitted and secured in the axial bore of said feeder plug and projecting upwardly into the counter-bore of the pen point holding section so as to centrally puncture the lower end of the cartridge when the latter is fitted into said counter-bore, said packing washer having a central opening snugly receiving the upper end of the punch to prevent leakage of ink from the ink cartridge about said punch.

MARGARET GERGELY.