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F. T. WALSH

1,804,522

FOUNTAIN PEN

Filed July 3, 1929

Fig. 1.

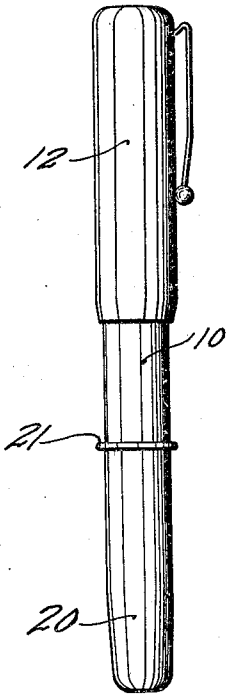


Fig. 2.

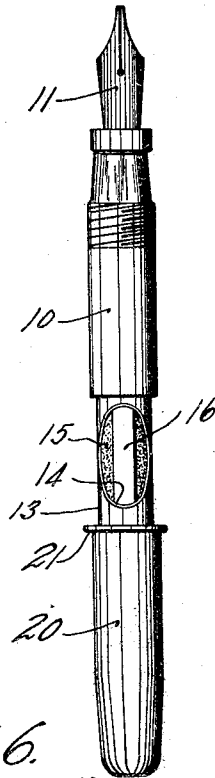


Fig. 3.

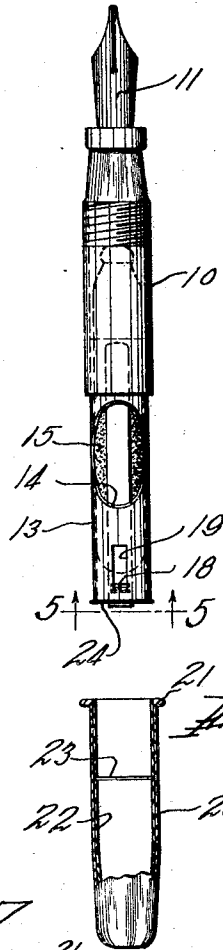


Fig. 5.

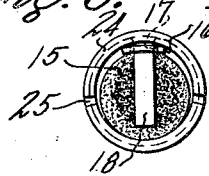


Fig. 6.

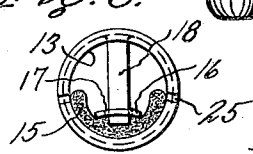


Fig. 4.

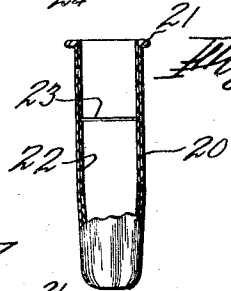


Fig. 7.

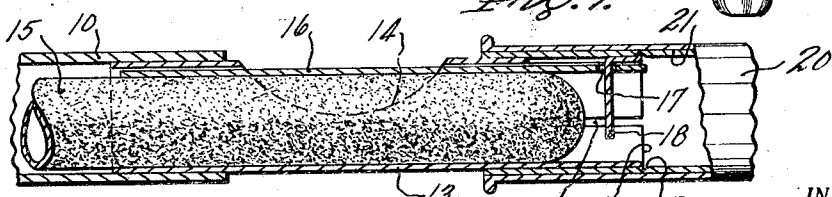
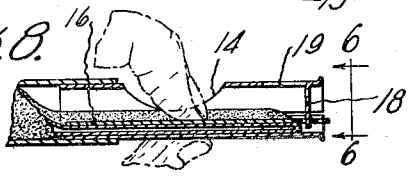


Fig. 8.



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# UNITED STATES PATENT OFFICE

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## FOUNTAIN PEN

Application filed July 3, 1929. Serial No. 375,764.

This invention relates to improvements in fountain pens, particularly to pens of the type having a flexible reservoir which may be compressed manually to permit filling of the pen. In the general type of pen to which this invention particularly relates, the pen body is provided with a finger opening which exposes the flexible reservoir therein and contains a presser bar which takes the thrust of the finger on the reservoir and distributes it over the entire surface thereof to more completely flatten the same when it is desired to refill the pen. The finger opening may be exposed by a sliding cap movable so that it either covers or is drawn back from the finger opening.

It is one object of this invention to improve upon former pens of this general type in providing a simpler and less expensively constructed presser bar and a simpler guiding mechanism for it. A further object is to provide presser bar mechanism which will have a minimum number of parts and which will, therefore, be subject to the least possible trouble in service. A further object of the invention is to provide a simple restraining means for the sliding cap so that in exposing the finger opening the cap will be stopped automatically in its movement but may be completely removed if desired. The invention will be described in connection with the accompanying drawings in which:

Fig. 1 is a side elevation of a pen embodying my invention;

Fig. 2 is a similar view with the usual nib protecting cap removed and with the sliding cap moved so as to uncover the finger opening;

Fig. 3 is a similar view showing the sliding cap entirely removed;

Fig. 4 is a view of the sliding cap partly in section;

Fig. 5 is an enlarged end view taken on line 5—5 of Fig. 3;

Fig. 6 is a view similar to Fig. 5 showing the flexible reservoir compressed and taken on line 6—6 of Fig. 5;

Fig. 7 is a fragmentary longitudinal section through the pen with the movable cap

slid into position to expose the finger opening, taken on a still larger scale; and

Fig. 8 is a view similar to a portion of Fig. 7 but on a smaller scale and showing the flexible reservoir compressed.

The fountain pen which I have illustrated has a body portion 10 provided with the usual pen point or nib 11. A protective cap 12 is screwed upon this body portion in the usual manner. Within the body portion 10 is secured a tube 13 which may be formed conveniently of thin brass and which is provided with a finger opening 14. Positioned within the tube 13 and connected to the pen nib in any suitable or conventional manner is a flexible reservoir 15, preferably in the form of a rubber tube closed at one end.

The pen as thus described is generally similar to those heretofore proposed and illustrated, for example, in the patent to Laughlin, No. 1,042,804, of October 29, 1912. The present pen is provided with a presser bar 16, preferably slightly concave in cross section, as shown in Fig. 5, and mounted freely within the tube 13, except as hereinafter described, so as to overlie the flexible reservoir. At the rear end of the presser bar (that is, the end remote from the pen nib) the presser bar is provided with a slot 17 located substantially centrally of the bar and extending transversely through a portion only of its width. Into this slot fits a tongue 18, preferably formed integral with the tube 13. A convenient way of forming this tongue 18 is by striking it up out of the body material of the sleeve so as to leave a slot 19, as shown in Fig. 3. This slot has no function of its own, merely representing the material of the tube which has been utilized in forming the tongue 18. The tongue acts as a guide for the presser bar, restricting it both sidewise and endwise in its movement, and forms the only guiding connection necessary between the presser bar and the tube. The guiding action of the tongue is particularly illustrated in Figs. 6 and 8.

Sliding over the tube 13 is a cap 20 preferably having a bead 21 positioned so as to conceal the line of junction between the cap 20 and the body portion 10 when the cap is

in the position of Fig. 1. The cap may be integral if desired but preferably has an internal sleeve 22 of brass or similar material provided with an annular recess 23. Into this recess a lip 24, formed by spinning or burring the end of the tube 13 outwardly, is adapted to fit. In order to give the desired springiness to the end of the tube so that the lip may snap into and out of the groove 23, the tube 13 is split, preferably in two places (as shown at 25) for a short distance from the end. When the cap is drawn to the position of Figs. 2 and 7, the lip 24 will spring into the recess 23 and stop the motion of the cap. In this position the finger opening 14 is exposed and no further movement of the cap is, therefore, desirable. If, however, it is desired to remove the cap entirely, a further pull may be given to it, whereupon the lip 24 will again spring out of the recess 23 and permit the cap to be pulled completely off the end of the tube.

What I claim is:

1. In a fountain pen, a tube having a finger opening in its wall, a collapsible reservoir within the tube, a single presser bar bearing against one side of the reservoir within the tube and extending past the finger opening, said presser bar having a transverse slot adjacent one end, a tongue struck up integrally from the material of the tube and extending part way only across the interior of the tube, said tongue passing through the slot in the presser bar so as to form the sole guiding connection between the tube and the presser bar.

2. In a fountain pen, a tube having a finger opening in its wall, a pen body secured over the tube at one side of the finger opening, a cap slidable over the tube to cover or to uncover the finger opening, the cap being formed with an internal annular groove, and an integral circumferential lip formed at the end of the tube and projecting outwardly therefrom so as to engage in the annular groove, the end of the tube having axially extending slots permitting the lip to yield inwardly and to pass by the groove in either direction, whereby the lip will spring into the groove when the cap is moved to uncover the finger opening but will yield when more than normal force is exerted on the cap to slide it off the tube.

In testimony whereof I have affixed my signature.

FRANK T. WALSH.