Feb. 28, 1939. H. J. BESSETTE 2,148,853

FOUNTAIN PEN

Filed April 26, 1938

Fig. 1.

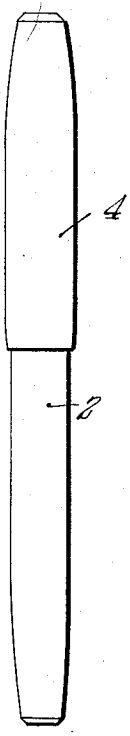


Fig. 2.

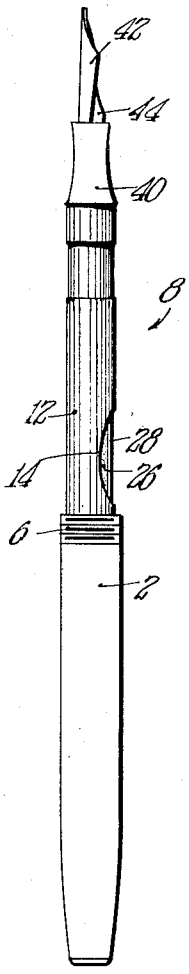
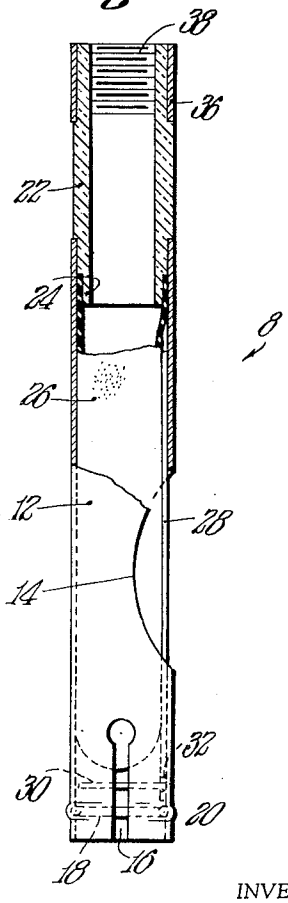


Fig. 3.



INVENTOR.

BY Homer J. Bessette.

Walter C. Rom.

ATTORNEY.

Patented Feb. 28, 1939

2,148,853

UNITED STATES PATENT OFFICE

2,148,853

FOUNTAIN PEN

Homer J. Bessette, Springfield, Mass., assignor to Le Boeuf-Pilgrim Pen Co., Inc., Springfield, Mass., a corporation of Massachusetts

Application April 26, 1938, Serial No. 204,285

8 Claims. (Cl. 120—46)

This invention relates to improvements in fountain pens and is directed more particularly to a novelly constructed ink-supply unit for use in fountain pens.

The principal objects of the invention are the provision of novel means for supplying ink to the pen point whereby the supply of ink in the pen is rendered visible and at the same time the supply means is constructed and arranged as a self-contained unit so as to be replaceable. This way it is possible for a dealer to make immediate repairs to a pen by supplying an ink supply unit and thereby avoiding the necessity of returning the pen to the factory or to a repair station as is the custom.

Various other novel features and advantages of the invention will be hereinafter more fully referred to in connection with the accompanying description of the present preferred form of the invention, reference being had to the accompanying drawing, wherein:

Fig. 1 is a side elevational view of a pen embodying the novel features of the invention;

Fig. 2 is an elevational view of the pen shown in Fig. 1 with the cap removed and the ink supply unit withdrawn; and

Fig. 3 is a combined elevational and sectional view at a larger scale of the ink supply unit shown in Fig. 2.

Referring now to the drawing more in detail, the invention will now be fully described.

The pen includes a barrel 2 and a cap such as 4 which may be removably secured thereto by screw threads 6 on the upper end of the barrel which cooperate with screw threads on the inside of the cap. The barrel 2 is tubular and in it is carried an ink supply unit represented generally by 8.

The unit 8 preferably includes a lower tube member 12 which may be formed of metal and having relatively thin walls. In a side thereof is a finger opening 14.

The lower end of tube 12 may be split so that said end is yieldable and a snap ring 18 is disposed inside the tube in a seat formed to provide an annular bulge 20. The unit 8 slides in and out of the tube and the inside of the barrel 2 carries a recess into which the bulge 20 fits when the unit is withdrawn to the position shown in Fig. 2.

The recess and bulge 20 thus cooperate to prevent the supply unit 8 from being withdrawn from the barrel accidentally. However, when it is desired to withdraw the unit entirely the construction is such that the lower end of the tube 12 yields sufficiently for the bulge to be drawn upwardly through the end of the barrel.

At the upper end of the unit 8 there is an upper tube member 22, the lower end of which is reduced to fit within tube 12 as shown. The upper end of tube 12 and lower end of tube 22 are secured together in some suitable manner.

A still further reduced part 24 of tube 22 is inserted within the upper open end of a reservoir or sack 26 as shown, the said sack being secured to the tube 22 in any suitable manner. The reservoir 26 is usually formed of rubber so as to be collapsible and it will contain the ink.

A presser bar 28 is within tube 12 and it overlies the sack 26. A tongue 30 struck up from the wall of the tube 12 extends through a slot 32 provided in the presser bar and across the tube. The tongue 30 and slot 32 act as a guide for the presser bar, and prevent its being separated from the unit yet the presser bar is free to be pressed inwardly against the sack so as to compress it.

The tube 22 is preferably formed of a transparent material so that the supply of ink in the unit is visible. In one way the tube may be made from some suitable plastic which is inherently transparent or, of course, it may be made of any material desired.

There may be a ring 36 disposed around the upper end of the tube 22. In any event, the said tube 22 is preferably internally threaded at 38.

A holder member 40 carries a pen point 42 and any suitable feeder member 44. The lower end of the holder 40 is provided with a screw-threaded part (not shown) for screwing into the upper threaded end of tube 22.

It will be obvious that by withdrawing the unit upwardly so that tube 22 is disposed at or above the upper end of tube 2, it is possible to visually determine whether or not there is ink in the unit. Also, it will be appreciated that by providing an ink supply unit such as is described, the repair man may remove the injured unit, supply the pen owner with one for temporary use in connection with his own barrel, point, etc., so that the pen will not be out of use while the injured unit is in the repair shop, and then repair the unit without inconvenience or difficulty.

It is generally the rubber sack which becomes injured first and it has heretofore been necessary because of the construction of pens to leave the whole thing with the repair man, often even necessitating the sending of the whole pen back to the factory.

By providing a replaceable ink supply unit such as I have shown and described, the sack can be

readily repaired or a new one secured to tube 22.

However, it is my intention that the pen owners take the injured pen into a store and obtain a new unit immediately, thus not tieing up the use of the pen during service. The injured ink-supply unit may be thrown away and because of the construction of the invention the cost of the new unit will not be any greater than the usual repair costs.

The means whereby ink is fed to the pen point from the supply unit is not shown in detail but it preferably includes a hollow tube extending downwardly from the pen-holder in such a way that its lower end extends into the supply unit when the holder and unit are threadedly engaged.

While I have described the invention in great detail and with respect to the present preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. In a fountain pen, an ink supply unit comprising in combination, an upper tube part for threadedly receiving a pen-holder, a collapsible sack for containing ink and having an open upper end secured to the lower end of said tube, a lower tube part surrounding said sack, and means between the walls of said lower tube part and said sack for pressing on the latter.

2. In a fountain pen, an ink supply unit comprising in combination, an upper tube part having means for threadedly engaging a pen-holder, a collapsible sack for containing ink and having an open upper end secured to the outside of the lower end portion of said tube part, a lower upper tube part around said sack, and a presser bar between said sack and said lower tube part, the latter being provided with a finger opening for permitting access to said presser bar.

3. In a fountain pen, an ink supply unit comprising in combination, an upper tube part having means for threadedly engaging a pen-holder, a collapsible sack for containing ink and having an open upper end secured to the outside of the lower end portion of said tube part, and a lower tube part around said sack, the lower end portion of said lower tube part being yieldable inwardly.

4. In a fountain pen, an ink supply unit comprising in combination, an upper tube part having means for threadedly engaging a pen-holder, a collapsible sack for containing ink and having an open upper end secured to the outside of the lower end portion of said upper tube part, and a lower tube part around said sack, the lower end portion of said lower tube part being yieldable inwardly and having an outwardly-extending projection.

5. As a new article of manufacture, a fountain pen comprising in combination, a barrel, a replaceable ink supply unit therein and removable therefrom, said unit including an upper tube part having means for threadedly engaging a pen-holder and a collapsible sack for containing ink secured to said tube part and a lower tube part surrounding said sack, a pen-holder threadedly in engagement with said upper tube part of the unit, and means associated with said barrel and said lower tube part whereby the unit and barrel are held in releasable engagement.

6. In a fountain pen, an ink supply unit comprising in combination, an upper part having means at the upper end therefor for detachably securing the same to a pen holder, a collapsible sack for containing ink and having an open upper end secured to the lower end portion of the said upper tube part, a lower tube part around said sack, and a presser bar between said sack and said lower tube part, the latter being provided with a finger opening for permitting access to said presser bar.

7. As a new article of manufacture, a fountain pen comprising in combination, a barrel, a replaceable ink supply unit therein and removable therefrom including, an upper tube part having means at the upper end thereof for engaging a pen-holder and a collapsible sack for containing ink secured to said upper tube part and a lower tube part surrounding said sack, a pen-holder in detachable engagement with said upper tube part of the unit, and means associated with said barrel and said lower tube part whereby the unit and barrel are held in releasable engagement.

8. As a new article of manufacture, a fountain pen comprising in combination, a barrel, a replaceable ink supply unit slidable in the barrel and removable therefrom including, an upper tube part having means at the upper end thereof for detachably engaging a pen holder, a collapsible sack for containing ink secured to said upper tube part and a lower tube part surrounding said sack slidable relative to said barrel, a pen-holder detachably engaged with the said upper tube part of the unit, and means associated with said barrel and said lower tube part whereby the unit and barrel are held in releasable engagement and the said lower tube part provided with a finger opening permitting access to said sack.

HOMER J. BESSETTE.