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(71) Applicant: **ECLIPSE FOUNTAIN PEN AND PENCIL.**

(72) Inventor: **DILLY WILLIAM BAIN ().**

(54) **FOUNTAIN PEN FEED**

(57) **Abstract:**

(54) **COULOIR DE STYLO**

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My invention relates to improvements in Fountain Pen Feeds, and the object of the invention is to devise a feed which will not jamb in the pen barrel due to the expansion and contraction of the walls of the barrel and at the same time produce a greater amount of displacement with a shorter thrust of the operating stem, in which the rubber displacing element is not held normally stretched thereby tending to lose its resilience, in which means for locking the stem against contraction of the resilient element is dispensed with and in which the above objects are attained by a simple cheap construction not liable to get out of order, and it consists essentially of a plunger pin slidably held in a guiding orifice in a plug forming the upper end of the ink reservoir, a sleeve of resilient material having parallel walls secured at one end to a reduced portion of the plug and at the opposite end to a similar portion carried by the plunger pin, and a series of rings normally in face to face contact and freely surrounding the plunger pin and frictionally engaging the sleeve at their outer peripheries as hereinafter more particularly explained.

Fig. 1 is a sectional view through a fountain pen showing my feed in the normal position.

Fig. 2 is a similar view to Fig. 1 showing the feed in the position of maximum displacement.

Fig. 3 is an enlarged sectional detail through the feed in the position shown in Fig. 1.

Fig. 4 is a similar view to Fig. 3 in the position corresponding to that shown in Fig. 2.

Fig. 5 is a sectional plan view on the line 5-5
Fig. 4.

In the drawing like characters of reference indicate corresponding parts in each figure.

1 is the barrel of a fountain pen having the usual nib carrying plug 2 at one end and the closure plug 3 at the opposite end and together forming the usual ink reservoir 4, the ink being fed to the nib through the usual nib feed tube 5. 6 is a reduced extension to the inner end of the plug 3 provided with an annular end bead 6^x forming a groove 6^o. 7 is a plunger pin slidably held in the orifice 3^x and provided at its upper end with a push button 7^x and at its lower end with an enlargement 8 corresponding in diameter to the portion 6^x of the plug 3 and provided with upper and lower annular beads 8^x and 8^l forming an intervening groove 8^o.

9 are a series of rings freely surrounding the stem 7 and having their external diameters corresponding to the diameters of the beads 6^x, 8^x and 8^l. 10 is a sleeve of thin resilient rubber or other elastic material which extends over the beads 8^l and 8^x, rings 9 and bead 6^x. The ends of the sleeve 10 are secured by the wires 11 and 12 within the grooves 6^o and 8^o.

It will be seen by this construction that when the plunger pin 7 is forced inward from the position shown in Figs. 1 and 3 to the position shown in Figs. 2 and 4 that the sleeve 10 is stretched and the inner end carried inward into the ink reservoir, The rings 9 being in frictional contact with the walls of the sleeve are carried by the stretch of the rubber from the contacting position shown in

Fig. 3 to the equally spaced apart position shown in Fig. 4. The rings in all positions are equally spaced apart so as to hold the walls of the sleeve 10 parallel to but clear of the walls of the reservoir producing a maximum displacement within the reservoir. The displaced air passes out through the nib feed tube 5 and the ink passes inward through such tube to fill the space from which the air has been displaced.

WHAT I CLAIM AS MY INVENTION IS:-

1. In a fountain pen feed, the combination with the pen barrel and a plug at the upper end thereof, of a resilient cylindrical sleeve extending inward from the plug parallel with the barrel walls, and means operated from the exterior of the plug for stretching the sleeve inward to increase the displacement within the barrel.

2. In a fountain pen, the combination with the pen barrel and a plug at the upper end thereof having a central orifice, of a cylindrical sleeve extending inward from the plug parallel with the barrel walls, a plunger pin extending through the orifice of the plug and through the sleeve, and means forming a closure for the inner end of the sleeve to which the plunger pin is connected.

3. A fountain pen feed comprising a plug forming the upper end of a fountain pen reservoir and having a central orifice and a reduced inner end, a plunger pin extending through the orifice and having an enlargement at the inner end corresponding in diameter to the reduced end, and a sleeve of elastic material secured at one end to the extension and at the opposite end to the enlargement.

4. A fountain pen feed comprising a plug forming the upper end of a fountain pen reservoir and having a central orifice and a reduced inner end, a plunger pin extending through the orifice and having an enlargement at the inner end corresponding in diameter to the reduced end, a sleeve of elastic material secured at one end to the extension and at the opposite end to the enlargement, and a series of rings surrounding the stem and filling the space between the plug extension and plunger enlargement and frictionally engaging the sleeve.

FIG. 1. 9x

FIG. 3.

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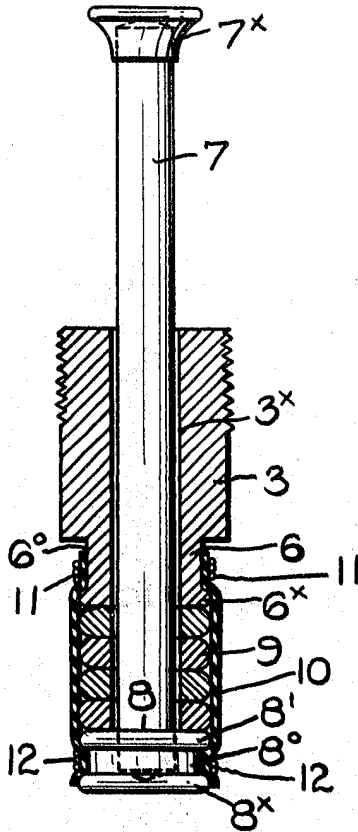
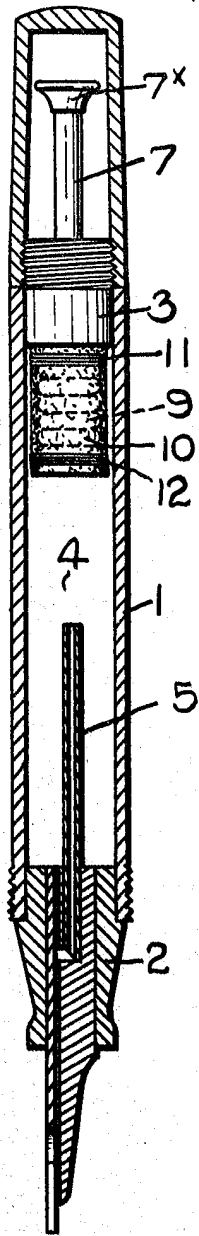


FIG. 2.

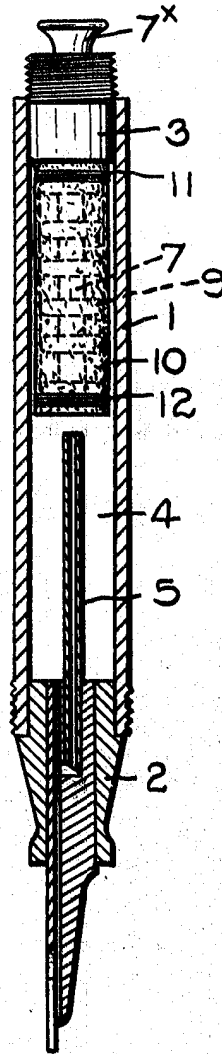


FIG. 4.

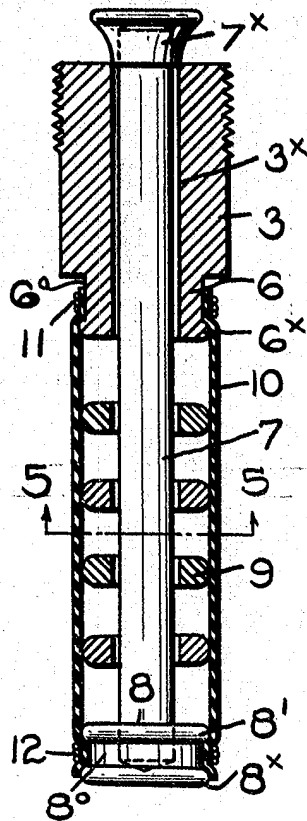
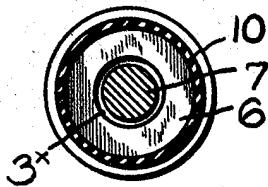


FIG. 5



Certified to be the drawing referred to in
 the specification hereunto annexed.
 Toronto, March, 30, 1935.

Inventor
 W. B. DILLY
 By *Fetherstonhaugh & Co*
 Attorneys