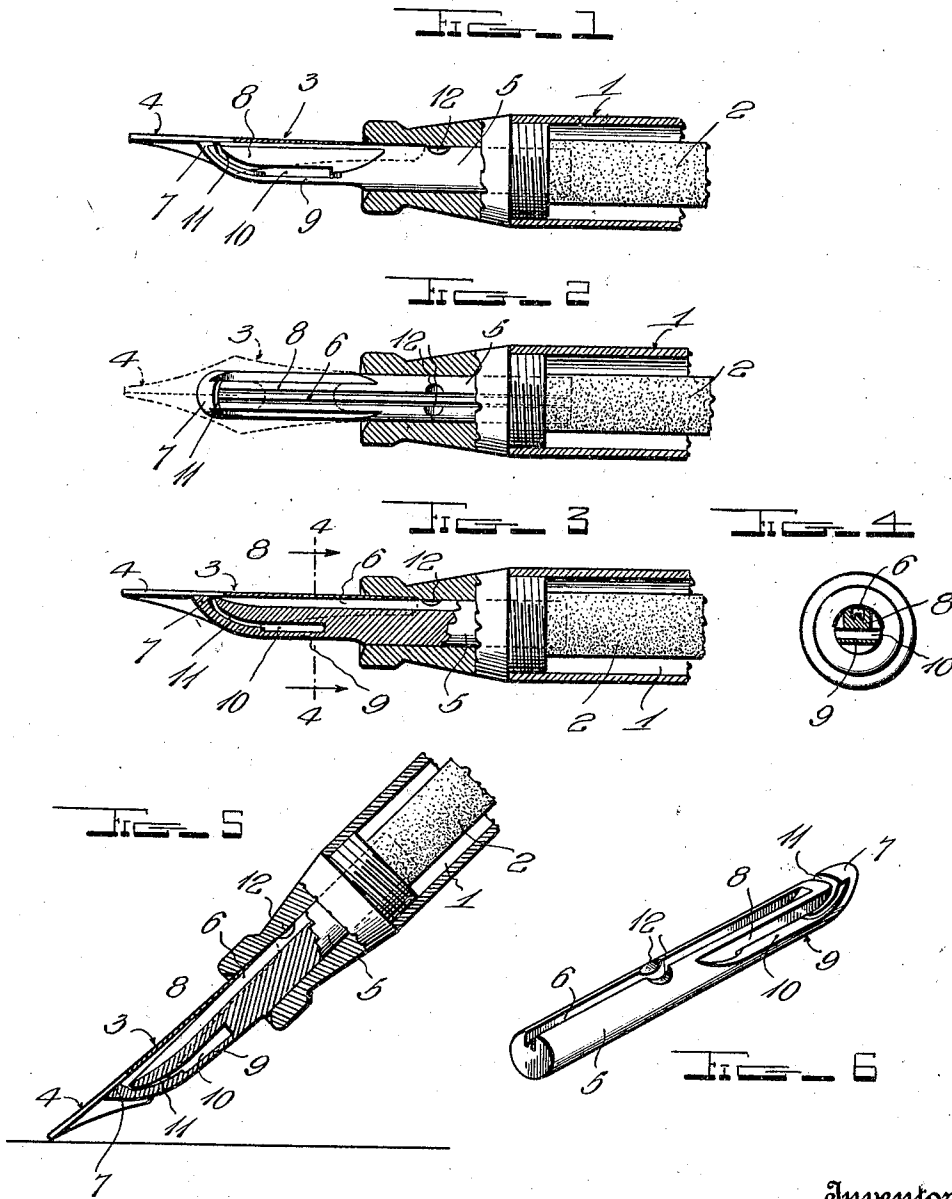


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A. K. LIDDELL
FOUNTAIN PEN INK FEEDING DEVICE

Filed Dec. 20, 1923



Witness

[Signature]

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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN INK-FEEDING DEVICE.

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To all whom it may concern:

Be it known that I, ARTHUR K. LIDDELL, a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Fountain-Pen Ink-Feeding Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to ink-feeding devices for fountain pens adapted to extend forwardly under the pen points to supply ink to the nibs.

When using any of the common forms of ink-feeding devices, the pen nibs are often sprung upwardly away from the feeding device and the ink can then rush freely from the latter down the lower sides of the nibs, causing a blot on the paper. In attempting to overcome this difficulty, feeding devices have been provided adapted to catch any surplus ink in a supplemental reservoir, but they have been effective only to a limited degree.

It is the object of my invention to improve upon ink-feeding devices of the type set forth, by the provision of novel ink-checking means adapted to remain constantly in contact with the pen nibs even when they are sprung upwardly away from the body of the feed device, thus positively preventing any surplus ink from running down said nibs onto the paper.

A further object is to construct the improved feed device in such a manner as to permit it to be easily and cheaply made from one piece of material.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawing.

Figure 1 is a side elevation of the improved feeding device showing its association with a pen point and a portion of a fountain pen barrel and ink sack.

Figure 2 is a view rather similar to Fig. 1, but looking downwardly against the feeding device.

Figure 3 is a longitudinal sectional view.

Figure 4 is a vertical transverse sectional view as indicated by line 4-4 of Fig. 3.

Figure 5 is a view similar to Fig. 3 but

illustrating the manner in which the ink checking device remains in contact with the pen nibs, when the latter are sprung away from the major portion of the feed device.

Figure 6 is a perspective view of the feed device.

I have shown my invention in connection with a fountain pen including a barrel 1, an ink sack 2, and a pen point 3 having the usual nibs 4. The feed device is designated by the numeral 5, said device comprising an elongated body which extends forwardly from the barrel and the ink sack and is formed in its upper side with a longitudinal ink channel 6 to supply ink to the nibs 4, from said sack. This feed device is formed with a resiliently mounted, self-raising terminal 7 adapted to at all times remain in contact with the lower sides of the nibs 4. When such pressure is placed upon these nibs as to spring them upwardly away from the body portion of the feed device 5, the terminal 7 projects above said body portion as shown in Fig. 5 and still remains in contact with the nibs. Thus, any surplus ink which would otherwise run directly down the lower sides of the nibs, is checked.

In the preferred form of construction, the feeding device 5 comprises a rigid finger 8 which extends under the haft of the pen to the nibs of the latter and is formed with the channel 6, and a longitudinal resilient tongue 9 spaced slightly below the finger 8 and having its front end curved upwardly slightly in advance of said finger, to provide the terminal 7. The space 10 between the body portion of the tongue 9 and the finger 8, constitutes a supplemental reservoir for ink and the space 11 between the terminal 7 and the front portion of said finger, forms a restricted ink passage leading to said reservoir. Thus, any surplus ink checked by the terminal 7, will be directed through the passage 11 into the supplemental reservoir 10 and whenever the pen is not in a writing position, this surplus ink will be returned to the sack or main ink reservoir, by capillarity. When in a writing position, the ink from the supplemental reservoir feeds to the pen point.

The rear end of the tongue 9 may be connected with the butt portion of the finger 8 in any desired manner, but in the preferred form of construction, both said finger and said tongue are formed of a single piece

of hard rubber or other desired material, so that they are integrally joined.

As clearly shown in the several views, the rigid finger 8 is preferably of less lateral width than the tongue 10 and the ink duct 6 which extends along the upper side of this finger, may well have auxiliary ink channels in its lower side with the well known functions, while the upper edges of the channel or duct are preferably formed with notches 12 which permit air bubbles to more readily break.

As excellent results have been obtained from the details disclosed and these details provide a device which may be easily and inexpensively manufactured without a great deal of special machinery, these details are preferably followed, but within the scope of the invention as claimed, numerous changes may be made.

I claim:

1. A fountain pen ink-feeding device comprising a finger to extend forwardly from the pen barrel under a pen point, said finger having a duct for feeding ink to the pen nibs, ink-checking means slightly in advance of said finger and adapted to contact with the pen nibs, said ink-checking means being resiliently mounted and adapted to project

above the finger when the pen nibs are sprung upwardly away from said finger, whereby to remain in contact with the nibs and check any surplus ink and prevent it from running down the lower sides of the nibs.

2. A fountain pen ink-feeding device comprising a rigid finger adapted to extend forwardly from a pen barrel under a pen point, said finger having a duct for supplying ink to the pen nibs, and a resilient longitudinal tongue spaced below the front portion of said finger and having its front end turned upwardly slightly in advance of said finger for contact with the pen nibs, said tongue end being constantly forced upwardly by the resiliency of the tongue and being adapted to project above said finger when the pen nibs are sprung away from the latter, whereby said tongue end may constantly bear against the pen nibs to catch any surplus ink and prevent it from running down the lower sides of the nibs.

3. A structure as specified in claim 2; said finger and tongue being integrally connected at the rear end of the latter.

In testimony whereof I have hereunto affixed my signature.

ARTHUR K. LIDDELL.