(Model.)

L. S. LEWIS.

FOUNTAIN PEN.

No. 272,066. Patented Feb. 13, 1883.

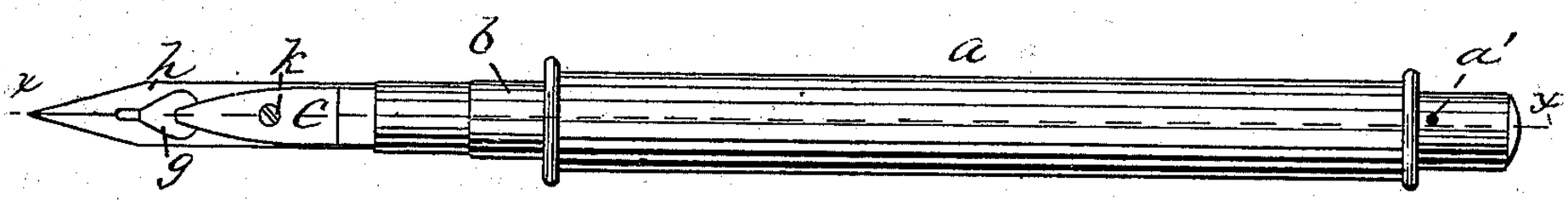


Fig. 1.

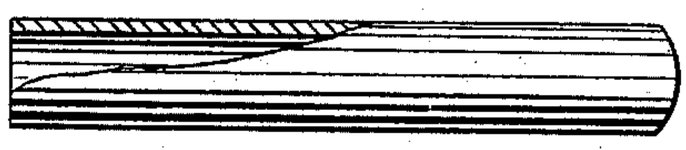


Fig. 3.

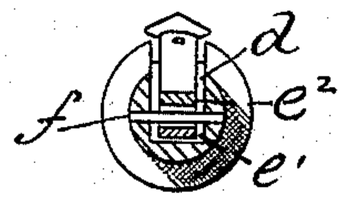


Fig. 2.

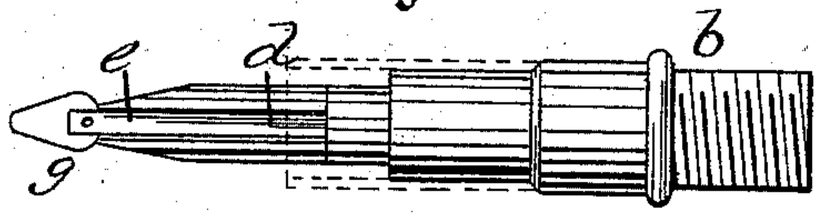
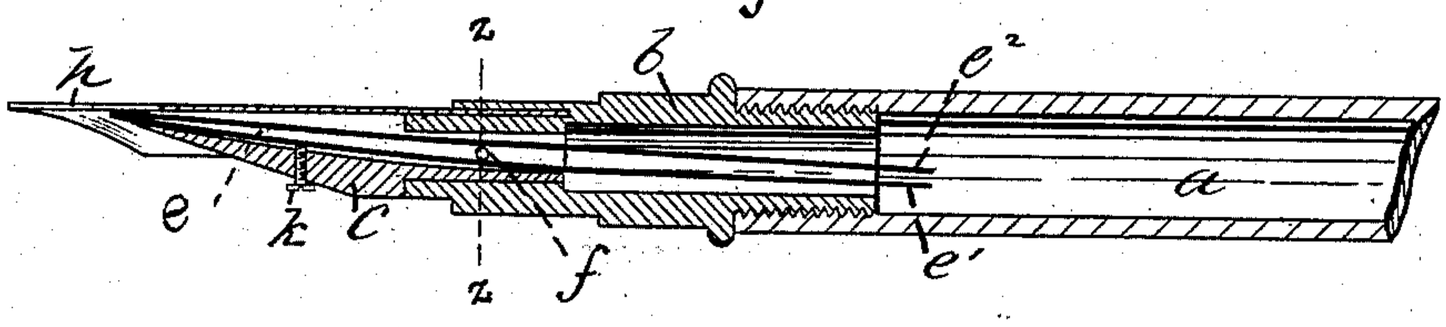


Fig. 4.



Witnesses
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Inventor.
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UNITED STATES PATENT OFFICE.

LEROY S. LEWIS, OF ROCKVILLE, ASSIGNOR OF ONE-HALF TO JAMES T. GOODRICH, OF NORWICH, CONNECTICUT.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 272,066, dated February 13, 1883.

Application filed December 4, 1882. (Model.)

To all whom it may concern:

Be it known that I, LEROY S. LEWIS, of Rockville, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a view of a pen-holder embodying my invention. The cap is shown partly in section below the main figure. Fig. 2 is a detail view of part of the device. Fig. 3 is a view in cross-section through the line *z z* of Fig. 4. Fig. 4 is a view in longitudinal central section on plane denoted by line *x x* of Fig. 1.

My invention relates to that class of pens in which the ink is contained in the holder, and known as "fountain-pens;" and it consists particularly in improvements in the method for causing the ink to feed evenly from the fountain to the pen-point.

In the accompanying drawings, the letter *a* denotes a hollow holder, closed at one end, with the exception of a small vent, *a'*, and at the other by a hollow plug, *b*, adapted to be secured to the holder by a screw-thread or other ordinary method. Another section, which may be called a "carrier," *c*, is adapted to fit tightly into the central perforation of plug *b*, and it is provided on one side with a channel or mortise, *d*, into which is fitted the feeder *e*. The channel is preferably formed with vertical sides and with a concave bottom in longitudinal section, as in Fig. 4. The feeder *e* is preferably formed of two pieces, e' e^2, of thin flat metal, fastened together by any suitable means, as by a rivet near their outer ends, and of a width adapted to fit across the mortise *d* and play readily up and down within it. One piece, e', lies in the bottom of the slot, held in place below the pin *f*, which is fastened in the carrier transversely of the mortise. The outer end of this piece has a broadened finger, *g*, which presses against the inner face of the nibs of the pen *h*, and the other end extends into the ink in the body of the holder. The piece e^2 is secured to the piece e' at a point near the finger and extends along the mortise near the top, passing over the pin *f* and into the ink in the holder. These two members or parts of the feeder and walls of the mortise form a channel, along which the ink is propelled by the vibrations of the feeder part e^2 as the pen-point is bent in writing. It will be seen that the feeder part e' is curved at the pin *f*, and the vibrations of the part e^2 depend for amplitude upon the distance from the pin to the point of the finger. The flow of ink is governed by the extent and frequency of these vibrations; and in order to govern this I make use of an adjusting-screw, *k*, appurtenant to the carrier *c*. By turning this screw in, its point presses against the feeder part e' and forms a fulcrum upon which it bends, and thus increases the distance traversed by the inner end of feeder part e^2 within the holder.

The plug *b* is grooved at the shoulder for the reception of a pen, and this groove and the diameter of the carrier are so arranged that the pen forms a cover for the channel and prevents the air from gaining access to it while the pen is in use. This is a very important point, as it insures the perfect flow of the ink and working of the device. These feeder parts may be fastened together at their inner end and work well; but I prefer the arrangement shown.

In order to prevent the backflow of ink from the pen upon the outside of the holder, I make use of a sleeve extending toward the pen, as shown in dotted lines in Fig. 2.

I am aware that the use of a spring in the tube of a fountain-pen, which spring is vibrated by the action of the pen in writing, is not new, and this I do not broadly claim.

I claim as my invention—

1. In a fountain-pen, a carrier provided with a longitudinal mortise, in combination with feeder parts in contact with the pen at the outer end and extending into the fountain at the other, and between which an ink-channel is formed, all substantially as described.

2. In a fountain-pen, in combination, holder *a*, plug *b*, carrier *c*, having longitudinal mortise *d*, feeder *e*, pin *f*, adjusting-screw *k*, and pen *h*, all substantially as described.

LEROY S. LEWIS.

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