

(No Model.)

N. C. STILES.
FOUNTAIN PEN.

No. 428,969

Patented May 27, 1890.

Fig. 1



Fig. 2

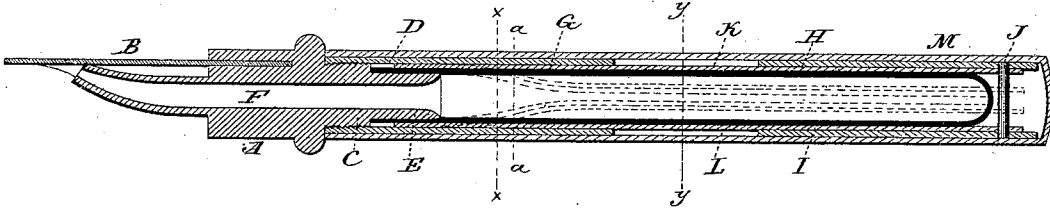


Fig. 3

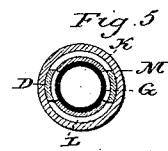
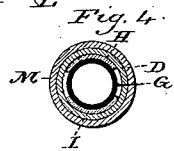
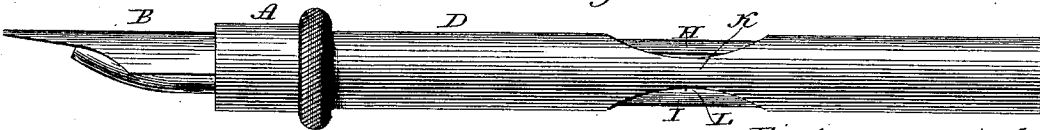


Fig. 6

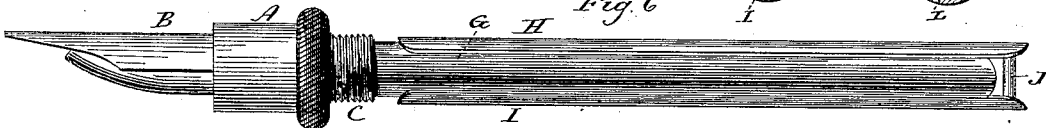


Fig. 7

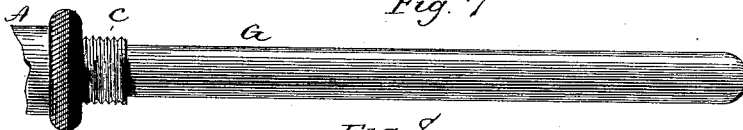


Fig. 8

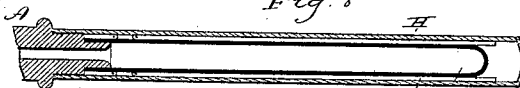
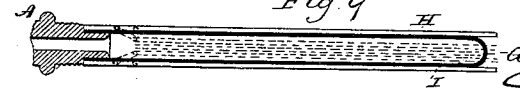


Fig. 9



Witnessed
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NORMAN C. STILES, OF MIDDLETOWN, CONNECTICUT.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 428,969, dated May 27, 1890.

Application filed April 29, 1889. Serial No. 309,039. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. STILES, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new Improvement in Fountain-Pens; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the pen complete; Fig. 2, a longitudinal central section of the same enlarged; Fig. 3, a side view of the same with the outer case removed; Fig. 4, a transverse section on line *xx* of Fig. 2; Fig. 5, a transverse section on line *yy* of Fig. 2; Fig. 6, a side view with the fountain or inner case removed, showing the bars as applied to the fount; Fig. 7, a side view of the socket and fountain without the case or bars; Figs. 8 and 9, modifications.

This invention relates to an improvement in that class of fountain-pens in which the fountain is an india-rubber or other flexible elastic tube.

The object of this invention is to adapt the elastic fount to be employed as the means for charging itself and without removing the fount or detaching the pen-socket; and it consists in the construction as hereinafter described, and particularly recited in the claims.

A represents the socket, to which the pen B is attached in the usual manner. This socket is constructed with a shank C, to which an inner inclosing-case D is secured by screwing thereon, as seen in Fig. 2. This shank has a further extension E into the case D, but of less diameter. Through the socket and its shank a tubular passage F is formed, leading to the inside of the pen, as usual in pens of this character. The inner case D is of a length corresponding to the length of fountain required.

G represents the fountain. This is a soft elastic india-rubber tube closed at one end, its open end secured to the extension E of the shank in any suitable manner. The fountain G is of less external diameter than the internal diameter of the case D.

Longitudinally within the case D, and be-

tween it and the fountain G and upon opposite sides of the fountain, bars H I are arranged. These are segment-shaped in transverse section, corresponding to the interior of the case D and the exterior of the fount, and so as to lie upon the surface of the fount between it and the case D, as seen in Figs. 4 and 6. These bars extend from the socket preferably to a position above the closed end of the fount, as seen in Figs. 2 and 6, and they are supported at the upper end by a pin J through the case D and through the projecting ends of the bars, but so as to allow the bars to be moved toward or from each other, as the case may be, and as indicated in broken lines, Fig. 2.

Through the case D finger-openings K L are formed about midway of the length of the fount, and which open directly onto the bars H I. Over the inner case D an outer case M is placed, which extends down to the socket and may simply slide upon the inner case D with sufficient friction to normally retain its position. This outer case serves as a cover for the openings K L through the inner case. A cap N is provided for the pen, which is removably set onto the pen-socket in the usual manner as a cap to close and protect the pen. This completes the construction.

When it is desired to charge the fount, the outer case M is withdrawn, exposing the openings K L, as seen in Fig. 3. The thumb and finger are then applied to these two openings directly onto the bars H I, and then by compressing the bars, as represented in broken lines, Fig. 2, the fountain will be correspondingly compressed between the two bars, thus collapsing the fountain. In this collapsed condition the tubular end of the socket is introduced into the ink, and then the pressure upon the fountain relaxed. The fountain under its own elasticity resumes its former position, and in so doing draws the ink into the fountain, and when the fountain is charged the cover M is replaced, and the pen operates in the usual manner for fountain-pens, the ink naturally flowing to the pen as the pen consumes it.

I prefer to make the bars of a length to take a bearing upon the socket at the pen end; but the bars may be made shorter—say as stopping on the line *aa*, Fig. 2; but in this case

the compression of the bars will operate to collapse the fountain as before, and as indicated in broken lines, Fig. 2. One of the bars may be omitted, if desirable; yet I prefer the employment of the two bars upon opposite sides.

I prefer to employ the outer case, as it covers the finger-openings K L, which would otherwise be exposed and render the fount liable to compression in use, which compression would unduly force the ink from the fountain; but the outer case may be omitted. The bars may be attached directly to the socket at one end, and extending longitudinally on the fount, as before described and as seen in Fig. 8, and so as to form connection between the bars at that end, and so that by simply pressing upon the bars to bring them together, as seen in broken lines, Fig. 9, the fountain will be compressed throughout its length, and when released from the pressure its own tendency to return to its normal position will draw the ink into the fount, as before described. The connection by which the bars are held is immaterial to the invention, it only being essential that the fount shall be provided with longitudinal bars upon opposite sides, by which the fount may be compressed substantially throughout its length.

From the foregoing it will be understood that I do not claim, broadly, a fountain for pen, made from elastic material, so as to be collapsed under pressure and automatically

resume the expanded condition when such pressure is removed; but

What I do claim is—

1. The combination of a pen-socket, an elastic fountain attached thereto, with a passage leading from the said fountain to the pen, a case attached to the socket and inclosing said fountain, and two bars arranged longitudinally between the said casing and fount, the casing constructed with finger-openings corresponding to said bars and through which openings said bars are exposed, the said bars connected at one end, so as to permit the play of the bars toward each other in compressing the fount, substantially as described.

2. The combination of a pen-socket, an elastic fountain attached thereto, with a passage leading from said fountain to the pen, a case attached to the socket and inclosing said fountain, one or more bars arranged longitudinally between said casing and the fount, the casing constructed with finger-openings corresponding to said bars and through which openings said bars are exposed, the said bars extending above the fount, and a transverse pin through the casing and bars above the closed end of the fount and upon which the said bars may play, substantially as described.

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Witnesses:

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