(No Model.)

A. J. SCRITCHFIELD.

FOUNTAIN PEN.

No. 564,938 Patented July 28, 1896.

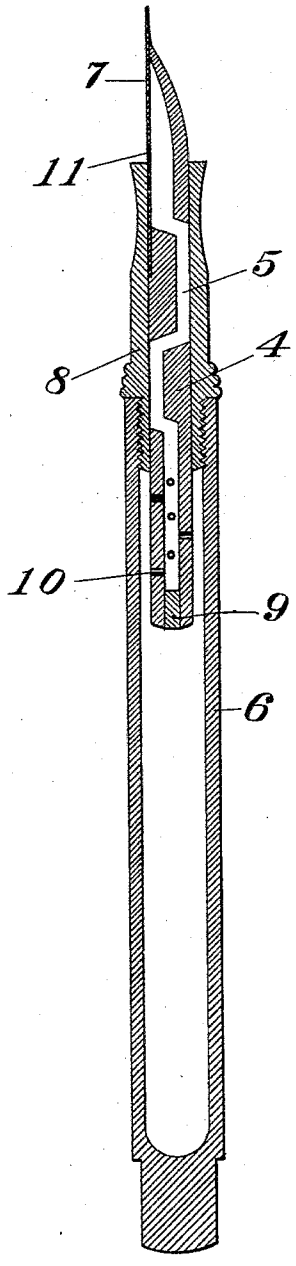

Fig. 1

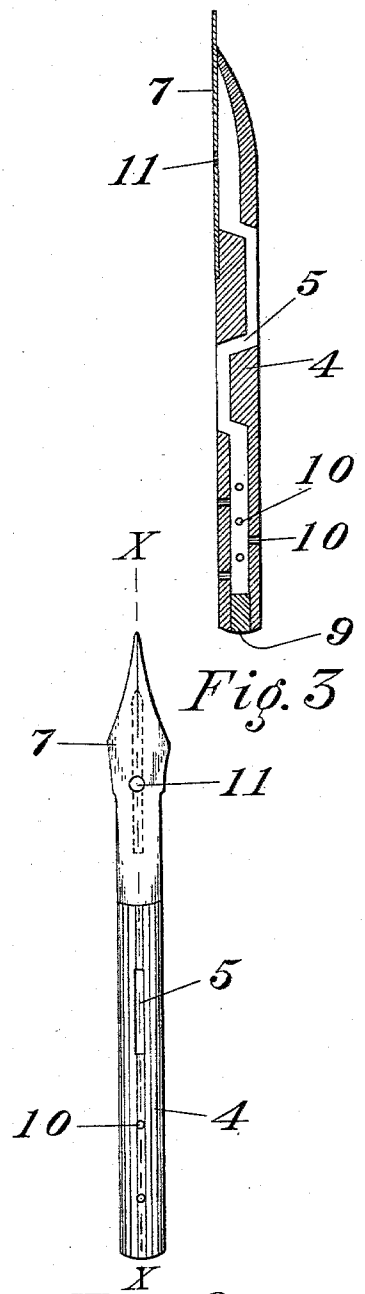

Fig. 3

Fig. 2

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UNITED STATES PATENT OFFICE.

AMOS J. SCRITCHFIELD, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 564,938, dated July 28, 1896.

Application filed March 9, 1896. Serial No. 582,406. (No model.)

To all whom it may concern:

Be it known that I, AMOS J. SCRITCHFIELD, of Janesville, in the county of Rock and State of Wisconsin, have invented new and useful Improvements in Fountain-Pens; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in fountain-pens, and particularly that portion of a fountain-pen by means of which ink is conveyed from the reservoir or barrel to the pen, and will be fully understood by a reference to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a sectional view of a complete pen containing my device. Fig. 2 is a view of my device as it appears when detached from the combining-ferrule 8, a pen being shown in its proper position. Fig. 3 is a sectional view of Fig. 2 through that portion indicated by the dotted lines X X.

The same figures of reference indicate identical parts in all the views.

The object of my device is to form a feeder for a fountain-pen, by means of which the pen is always kept moist and ready for instant use, and also one which will not flow so freely as to cause the ink to drop from the point of the pen. This object is accomplished by constructing the conduit 5 of my device in the particular zigzag or circuitous manner shown, having its inner end closed by the plug 9 and receiving its supply of ink through the minute lateral orifices 10, whereby capillary attraction is caused to act largely in the successful operation of my device, in that the conduit 5 becoming filled with ink, when the pen is being used, the lateral orifices 10 are sufficiently small to retain the ink in the conduit and not permit the same to drain therefrom by gravity when the pen is inverted and placed in the pocket. The circuitous formation of the conduit 5 also has a tendency to retard the action of gravity, and thus, by a combination of the circuitous duct and the lateral orifices 10, I produce a perfect feeder. I find, by practical test, that forming the conduit in the circuitous manner shown, leaving out the plug 9 and not forming the lateral orifices aforesaid, ink not only flows too freely, but the pen becomes dry and clogged when not in operation. Also when the duct is formed straight and the lateral orifices 10 are employed the same unsatisfactory result obtains. Hence it follows that my particular combination is necessary to obtain perfect results.

Having thus set forth the object of my device, I proceed to describe its formation in detail.

The feeder consists of a small cylinder, preferably of vulcanized rubber, wherein the conduit 5, for a short distance at the inner end of the cylinder 4, occupies a position immediately in the center thereof, and until said cylinder has entered the combining-ferrule 8, said portion being the part which is within the barrel 6 or reservoir of the holder, this portion aforesaid is pierced, through the periphery of said cylinder 4 through to the conduit 5, by numerous small orifices 10, which supply the ink to the main conduit 5. Where the cylinder 4 enters the combining-ferrule 8 the conduit 5 turns at nearly a right angle and proceeds to and through the periphery of said cylinder, thence along the said periphery for a short distance and turns at very nearly a right angle, proceeding through the body of said cylinder to the opposite side hereof, where it again cuts through the periphery, proceeding thence along said periphery longitudinally at a somewhat greater distance than on the opposite side, and again turns at very nearly a right angle and proceeds to the periphery on the opposite side of said cylinder 4, at which juncture said cylinder is in contact with the pen and at which point ink is transmitted to said pen. Hereat the cylinder 4 and said conduit have emerged from the combining-ferrule, and the cylinder is brought to a point or rounded up against the pen at one side, and the other side of said cylinder is made to conform closely to the inner concave surface of the pen, the side approximate to the pen being the one through which the conduit emerges.

The cylinder fits closely into the combining-ferrule 8, and where the conduit 5 cuts through the cylinder 4 or the periphery

thereof the inner surface of the orifice in said ferrule supplies the necessary wall to form a complete tube or duct of said conduit. In that portion of the cylinder which is within the reservoir 6 the conduit is directly in the center, and so much thereof is a regularly-formed tube, the open end whereof is closed by a cork or plug 9, and to permit the proper quantity of ink to enter therein the small lateral orifices 10 are formed through the wall of said cylinder, communicating with the conduit 5, for the admission of ink from the reservoir. The lateral orifices 10 are sufficiently small so that no foreign substance can enter them to obstruct the flow of ink or clog the pen. Said conduit 5, and particularly the lateral orifices thereof, are sufficiently small, so that capillary attraction plays a part in the passage of ink therethrough, which feature is particularly valuable in retaining the ink within said conduit when the reservoir becomes nearly empty and the pen is inverted in the pocket, in that it causes the ink to remain within said duct, restraining it from draining therefrom by gravity, and by which means the pen is kept moist and always ready for immediate and rapid use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a fountain-pen a feeder having a circuitous conduit in combination with lateral orifices communicating with the reservoir or ink supply, as shown, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

AMOS J. SCRITCHFIELD.

Witnesses:
CORNELIA REDDY,
MAUDE MCDONALD.