No. 629,519. Patented July 25, 1899.

S. J. MEYERPETER.

FOUNTAIN PEN.

(Application filed Mar. 1, 1899.)

(No Model.)

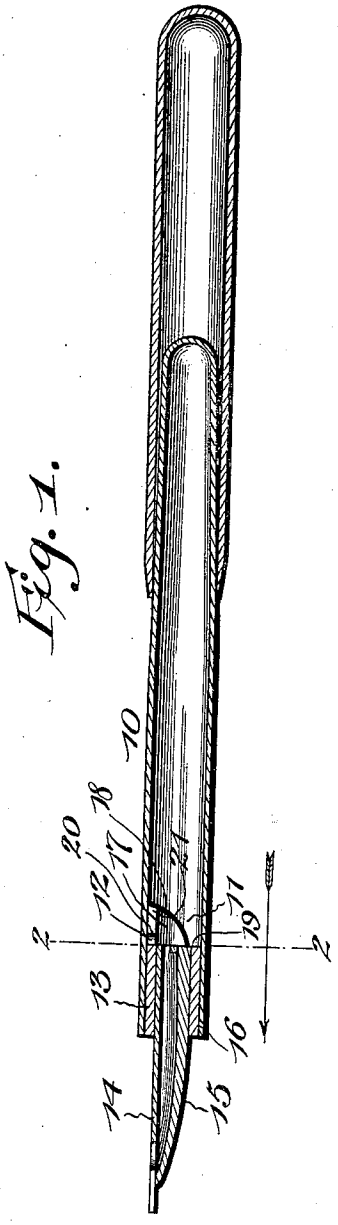

Fig. 1.

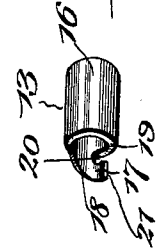

Fig. 3.

Fig. 2.

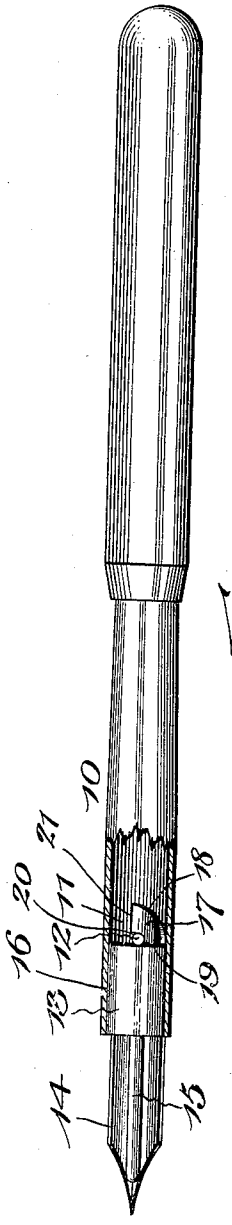

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

STEPHEN J. MEYERPETER, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 629,519, dated July 25, 1899.

Application filed March 1, 1899. Serial No. 707,419. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN J. MEYERPETER, a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented a new and useful Fountain-Pen, of which the following is a specification.

My invention relates to improvements in fountain-pens of that class wherein the nozzle is connected detachably to the lower end of the tubular reservoir-staff and is adapted to carry the pen and the capillary feed-bar; and the object in view is to dispense with the ordinary threaded joint between the nozzle and the reservoir-staff by providing an improved construction which enables the nozzle to be detached and replaced with ease and expedition and secures a fluid-tight joint between the separable parts.

The ordinary thread-joint between the nozzle and the tubular staff is objectionable for several reasons—first, because the ink is liable to coagulate and harden in the engaging threads and render it very difficult to remove the nozzle, often requiring the application of considerable force to the nozzle and staff to overcome the resistance of the joint, and, secondly, the operation of screwing or unscrewing the nozzle to or from the staff cannot be effected quickly, and care must also be taken to keep the threads clean or free from accumulations of ink in order to facilitate the adjustment of the nozzle. To overcome these objections, I have devised a novel construction and arrangement of parts which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of the present specification, and in which—

Figure 1 is a longitudinal sectional elevation of a fountain-pen embodying this invention. Fig. 2 is a transverse section on the plane indicated by the dotted line 3 3 of Fig. 1. Fig. 3 is a detail perspective view of the improved nozzle removed from the tubular staff. Fig. 4 is a longitudinal section showing the nozzle partly fitted in the staff and illustrating the mode of adjustment of the nozzle in removing or replacing it.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

The tubular pen-staff 10 is similar in its general features to ordinary devices in the art; but in lieu of forming the lower open end of the staff with a female thread I provide said end of the staff with a smooth interior surface 11. Within the smooth interior surface of said staff is secured or formed a locking pin or stud 12, that is adapted to engage with a part of the nozzle 13 to securely confine the latter against endwise displacement within said staff. This nozzle 13 is made of a single piece, and, as is usual in the art, it is constructed or fashioned to carry the pen 14 and the ordinary capillary feed-bar 15, the latter extending beyond the heel of the nozzle and into the ink-reservoir of the tubular staff for the purpose of supplying the ink by capillary attraction to the nibs of the pen 14. This nozzle is not externally threaded like prior devices in the art; but, on the contrary, the external surface of the nozzle is smooth and unbroken, as clearly shown by Fig. 3. In practice I prefer to make the pen-staff and the nozzle of hard rubber, although any other suitable material may be used, and the nozzle is proportioned to fit accurately into the open end of the tubular staff to the end that the smooth cylindrical surface 16 of the nozzle will engage frictionally with the smooth inner surface 11 of the staff for securing a friction-tight joint, which will prevent the leakage of the ink between the separable nozzle and the staff. The nozzle is, furthermore, provided with a locking-finger 17, which is preferably integral with the nozzle and is extended beyond the heel or inner end thereof. This locking-finger is formed with a spiral 18 at one edge thereof, and the heel of the nozzle has an annular smooth edge 19, which is interrupted or broken by the locking-finger 17. A notch or recess 20 is provided at the line where the straight edge 21 of the locking-finger lies adjacent to the straight heel 19 of the nozzle, and this notch or recess is of sufficient depth to receive the pin or stud 12 for holding the nozzle securely in place against endwise movement within the staff.

In adjusting the nozzle to the staff the locking-finger 17 is first thrust into the lower

open end of the staff, and the nozzle is slipped endwise therein until it is arrested by engagement with the stud or pin 12. If the nozzle occupies a position within the staff for its straight edge or heel 19 to abut against the pin or stud, it is only necessary to rotate the nozzle slightly in a direction for the stud to enter the notch 20 of the nozzle, thus locking said nozzle detachably and firmly to the staff. If, however, the edge 18 of the locking-finger abuts against the stud or pin 12, the nozzle must be rotated within the staff sufficiently for the stud to ride against the heel or edge 19 in order that the stud may assume a position which will enable it to enter the notch. If the nozzle is rotated in one direction, the spiral edge 18 of the finger will ride against the stud to move the nozzle a limited distance in the staff until the extreme end of the finger clears the stud, after which an inward movement or thrust of the nozzle will cause the stud to ride along the straight edge 21 of the finger, and the nozzle may then be turned slightly in a reverse direction to make the stud enter the notch.

From the foregoing description it will be understood that I have provided an improved construction of the fountain-pen by which the ordinary thread-joint is dispensed with and the nozzle is fitted in the staff to have a liquid-tight frictional joint therewith and is interlocked against endwise displacement by means which permit the insertion or withdrawal of the nozzle to be effected easily and quickly. The nozzle is so constructed that it may be interlocked by proper adjustment thereof with the pen-staff in either position of insertion of the nozzle, and it is not necessary to entirely withdraw the nozzle from the staff should the nozzle be improperly inserted. The described means enables the parts to be separated for the purpose of replenishing the ink-supply in the tubular staff or of cleansing the nozzle and the staff.

Changes may be made in the form and proportion of some of the parts while their essential features are retained and the spirit of the invention embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

As no novelty is herein claimed for the pen or the feeder-bar, it will be understood that any kind of pen or feeder may be attached to the nozzle, and said pen or feeder may readily be removed and interchanged with any desired devices known to those skilled in the art.

Having thus described the invention, what I claim is—

1. A fountain-pen consisting of a staff having an internal, smooth surface and a locking stud or pin, and a removable nozzle having an external smooth surface and provided with an extended finger which is notched and formed with a spiral edge to have interlocking engagement with the stud or pin of the staff, substantially as described.

2. In a fountain-pen, the combination with a staff, of a nozzle having a notched locking-finger, and a pin or stud fixed within the staff in the path of the finger and arranged to interlock with the notch therein to hold the nozzle against endwise displacement in either direction within the staff, substantially as described.

3. In a fountain-pen, the combination with a tubular staff having an unthreaded, internal friction-surface at its open end, of a smooth, unthreaded nozzle slidably and revolubly fitted within the staff, and provided with a spiral, notched locking-finger, and a stud fixed within the staff in the path of said finger, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

STEPHEN J. MEYERPETER.

Witnesses:
MAUDE BRACE,
T. S. NOLAN.