

G. S. PARKER.
 FOUNTAIN PEN.
 APPLICATION FILED JUNE 16, 1910.

990,288.

Patented Apr. 25, 1911.

Fig. 1.

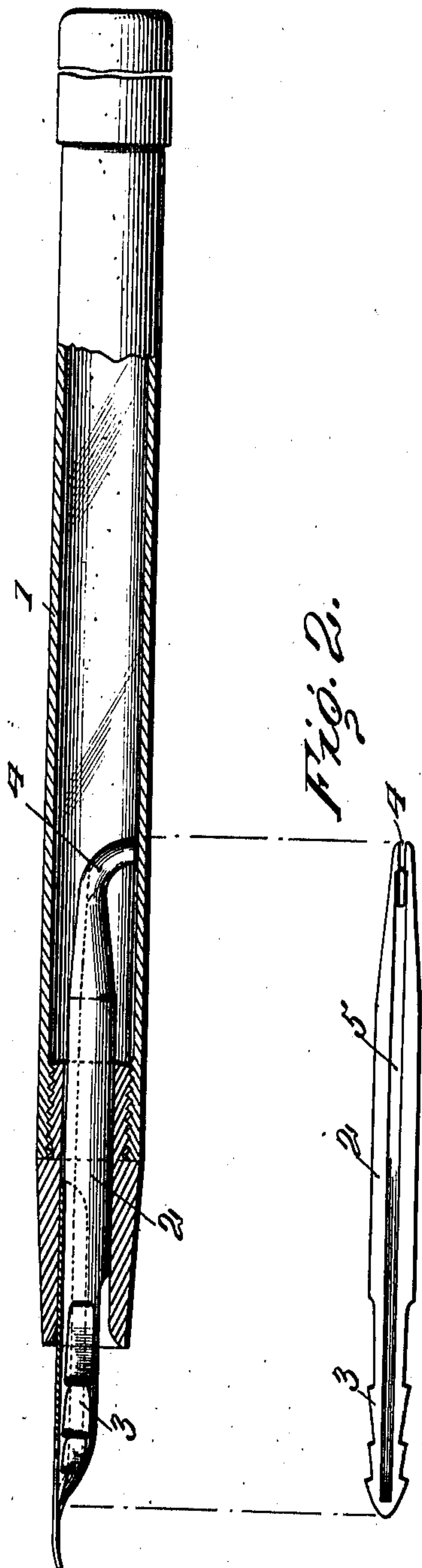
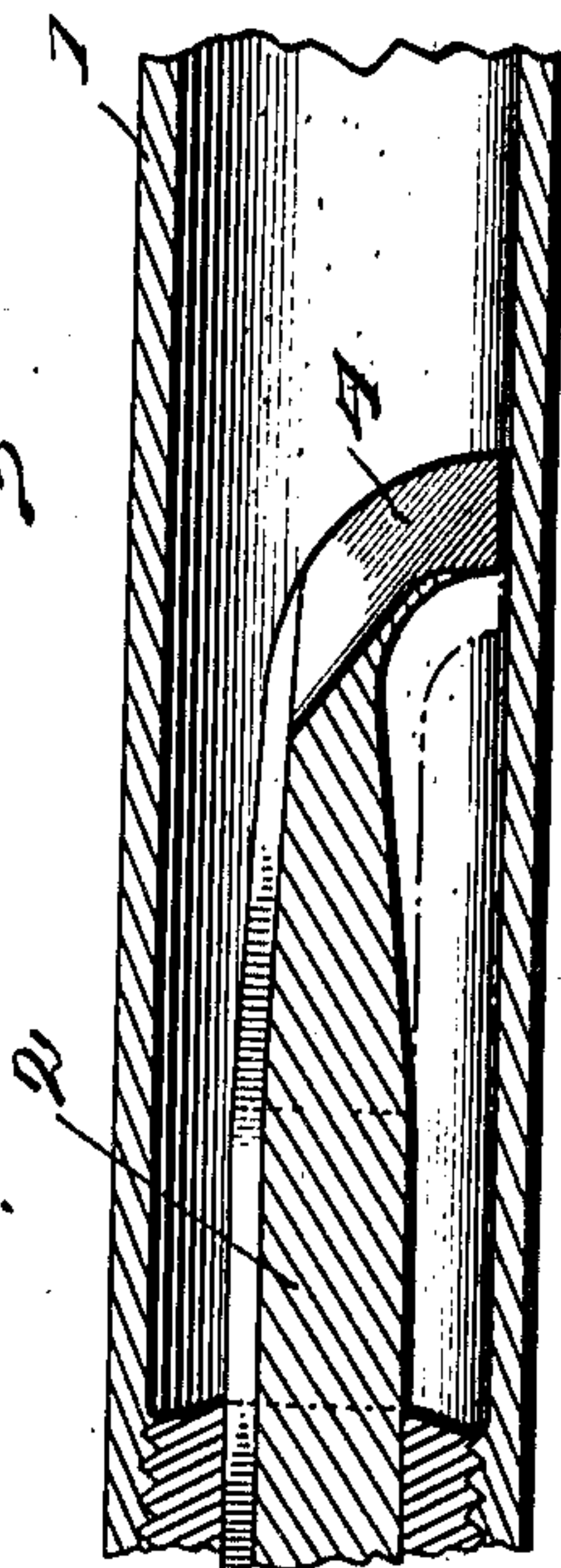


Fig. 2.



Fig. 3.



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GEORGE S. PARKER, OF JANESVILLE, WISCONSIN.

FOUNTAIN-PEN.

990,288.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed June 16, 1910. Serial No. 567,240.

To all whom it may concern:

Be it known that I, GEORGE S. PARKER, a citizen of the United States, and a resident of Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to fountain pens and more particularly to feeders of the type provided with a curved inner end and illustrated in Patents Nos. 512,319, January 9, 1894, 606,231, June 28, 1898, and 778,997, January 3, 1905, heretofore granted me.

My feeder is designed to effect the withdrawal of the ink from the feeder and nozzle of the pen when the latter is inverted and returned to the pocket, and to do this without interference with the effective feed of the ink to the pen point and nozzle when the pen is in use.

It is well known that after the ordinary fountain pen is inverted and placed in the user's pocket, the feed channel being small holds the ink in suspension by capillary action, and if there is sufficient difference between the temperature of the pen when it is returned to the pocket and the temperature of the wearer's body, the heat from the body will expand the air within the reservoir, thus forcing the suspended ink in the feeder channel up through the nozzle of the pen in sufficient volume to spill over the edge thereof and thus cause "leaking" or "sweating."

In my prior patents hereinbefore referred to the feeders are channeled bars having a part extending into the reservoir of uniform cross section and having their inner ends bent or curved to bring the end or mouth of the feed channel substantially into contact with the moist side of the reservoir. The result of this construction was that the ink was drawn out of the feed channel and into the reservoir by capillary attraction, this action occurring as soon as the pen was placed in the pocket. This to a considerable extent met the difficulty above referred to, but it was found in practice that owing to the slight difference between the bore of the reservoir and that of the nozzle, the curve or bend in the end of the feeder was necessarily small and the distance between the feeder and the reservoir wall at this point was necessarily slight so that the ink would sometimes gather between the feeder and the reservoir wall adjacent the bend and between

the mouth of the feeder or the portion of it coming into contact with the inner surface of the reservoir and the part of the feeder entering the inner end of the nozzle. This prevented ink from being completely returned to the reservoir.

The object of my present invention is to improve upon the construction just described by preventing gathering of ink at the point stated and in this way causing the ink to be positively, immediately and completely returned to the reservoir when the pen is placed in the pocket. This result is accomplished by tapering the inner end of the feeder and providing it with a bend or turn. This increases the space between the under side of the bend and the wall of the reservoir and reduces the cross section of the inner end of the feeder and the area of its contacting face as compared with the body of the feeder. This prevents ink from being held by capillary action at and adjacent to the bend. It will be understood that my purpose may be in part effected by removing or omitting a portion of the material of the feeder adjacent the bend without tapering the inner end.

Lengthwise of the feeder in the face thereof on the side opposite the bend, a feed channel extends from the tapered end to the pen point. Extending completely across the diameter of the tapered end in the face thereof is a cut or aperture, and the feed channel and this cut are connected by a slanting capillary groove, the whole forming a continuous passage from the pen point to the side of the reservoir.

Referring to the accompanying drawings: Figure 1 is a longitudinal sectional view of a fountain pen provided with my improved feeder. Fig. 2 is a plan view of the channeled side of the feeder. Fig. 3 is an enlarged fragmentary vertical section of the feeder in its place in the barrel, the outlines of my prior construction of feeder being shown in dotted lines.

Referring to the drawings by numerals, 1 indicates a fountain pen of conventional design provided with my improved feeder. This feeder consists of a bar having its body preferably cylindrical to fit within the nozzle section of the pen and having its forward end cut to fit within the concave portion of the pen point. In the drawing I have shown this forward end provided with serrated sides to form ink cups but this

forms no part of the present invention. The body 2 of the feeder adjacent its rear end is tapered and terminates in a bend 4, the end face of which contains the mouth or end of the feed channel; both said end and mouth being substantially in contact with the side wall of the reservoir. This tapered portion of the feeder is of relatively small cross section compared with that of the body 2. The result of this construction is that there is more room at the under side of the bend 4 between it and the side of the reservoir and that the area of the contacting face of the bend is smaller than in my former constructions. The taper or slant may be greater at the under side of the feeder than elsewhere.

The feeder I have illustrated is of the type in which the ink is fed to the under side of the pen, although I do not limit myself to this form. Extending lengthwise in the face of the feeder on the side opposite to the bend is the feed channel 5 which has its mouth at the contacting face of the bend 4 and leads therefrom to the nozzle and pen point. The portion of this channel at the bend I make inclined in order to increase the rapidity and completeness of the withdrawal of ink from the channel. I also may make this part of the channel smaller than the rest to increase capillary action and extend it completely across the diameter of the tapered end.

With my improved construction I find that when the pen is inverted and returned to the pocket the ink is drawn down through the channel in the feeder almost instantly and that this action is positive and complete.

What I claim as my invention is:

1. In a fountain pen, a feeder having a short extension within the reservoir and provided with a feed channel the inner end of said extension being reduced in cross section and terminating in a bend the end face of which containing the mouth of the feed

channel is substantially in contact with the side of the reservoir.

2. In a fountain pen, a feeder extending within the reservoir, provided with a feed channel and having its inner end tapered and terminating in a bend the end face of which is substantially in contact with the side of the reservoir.

3. In a fountain pen, a feeder extending into the reservoir, having its inner end formed to be substantially in contact with the side of the reservoir and provided with a continuous channel in its face having its open mouth facing and substantially in contact with the side of the reservoir and extending therefrom to the pen point, a part of the material of the feeder adjacent the under side of the bend being removed.

4. In a fountain pen, a feeder extending into the reservoir and terminating in a bend the end face of which is substantially in contact with the wall of said reservoir, said feeder being provided with a feed channel in the face opposite the bend having its open mouth facing and substantially in contact with the side of the reservoir and extending from the contacting end face of the bend to the pen point, a portion of the body of the feeder adjacent the bend on the side of the feeder opposite the feed channel being removed.

5. In a fountain pen, a feeder extending into the reservoir and terminating in a bend the end face of which is substantially in contact with the wall of said reservoir, said feeder being provided with a feed channel extending lengthwise along the feeder from the contacting end face of the bend to the pen point and having a slanting portion extending along the bend.

Signed by me this 13th day of June 1910.

GEORGE S. PARKER.

Witnesses:

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