

No. 708,572.

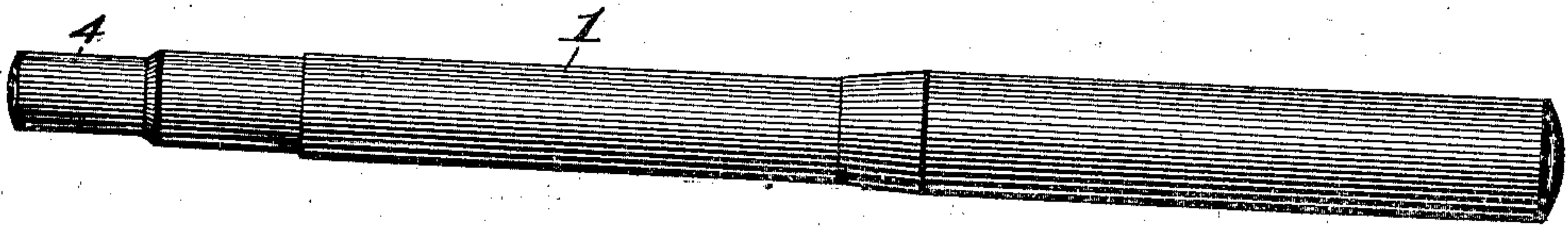
C. F. MILLER.  
FOUNTAIN PEN.

Patented Sept. 9, 1902.

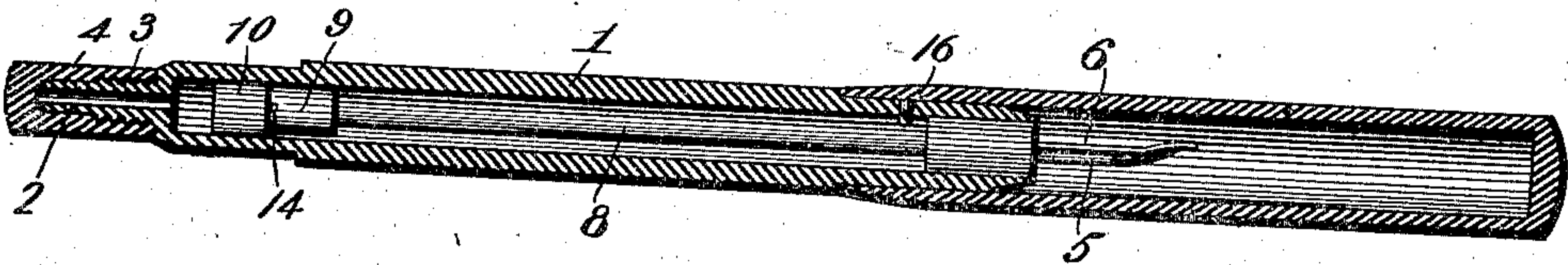
(No Model.)

Application filed May 13, 1901.)

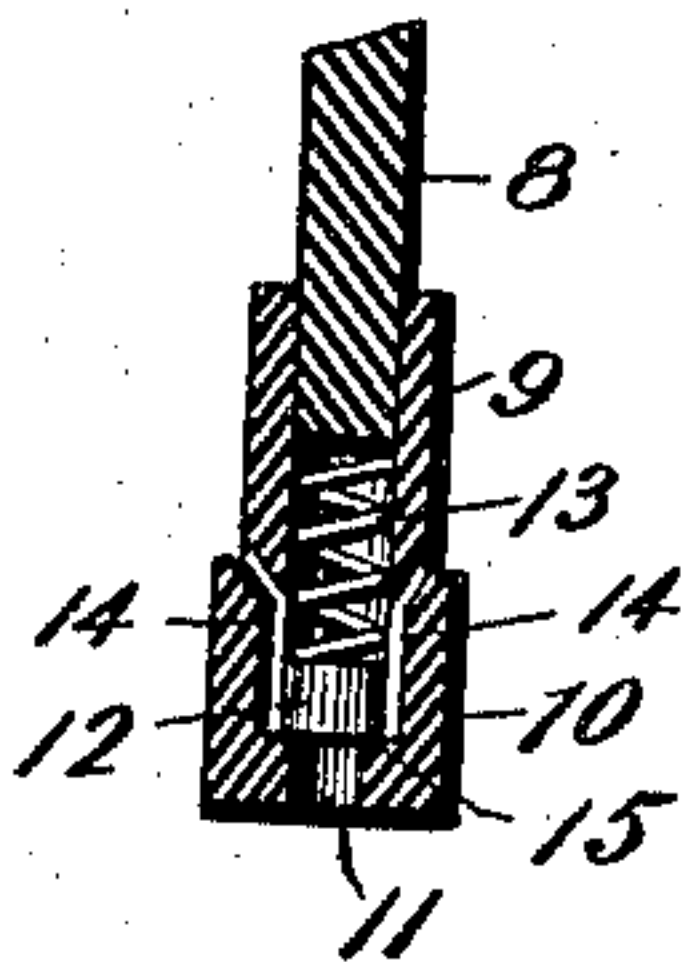
*Fig. 1.*



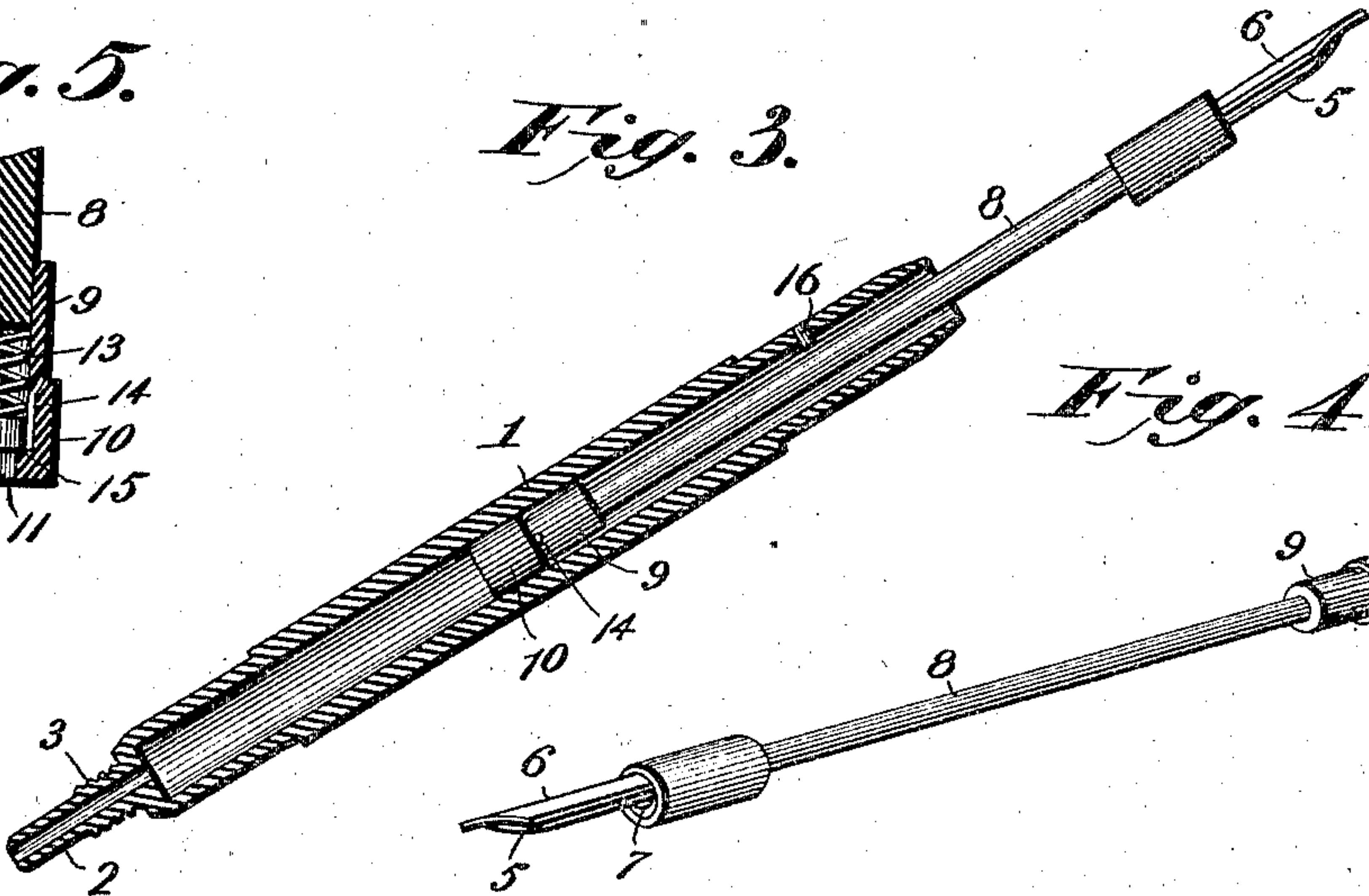
*Fig. 2.*



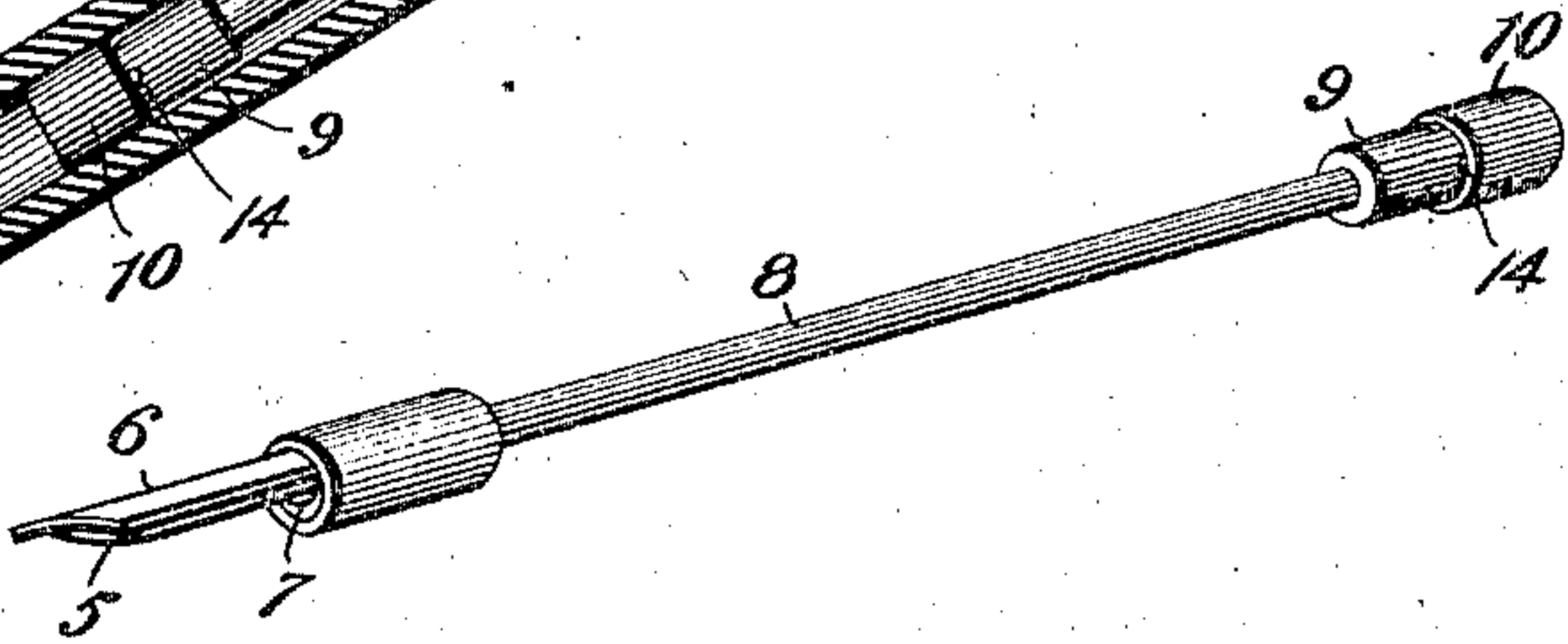
*Fig. 5.*



*Fig. 3.*



*Fig. 4.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

CARL FREDRICK MILLER, OF JANESVILLE, WISCONSIN.

## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 708,572, dated September 9, 1902.

Application filed May 13, 1901. Serial No. 59,956. (No model.)

*To all whom it may concern:*

Be it known that I, CARL FREDRICK MILLER, a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Fountain-Pens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fountain-pens; and it consists in improvements whereby a force feed and filling action is attained through the use of a piston in a novel manner. The object of the invention is to produce a fountain-pen by which ink is drawn within the barrel or body through the agency of a plunger, a piston which draws the ink into a nozzle formed with or attached to the upper end of the body, said nozzle being incased by a cap.

Furthermore, the object of the invention is to produce a fountain-pen piston having a novel valve and valve-seat to accomplish the result stated.

Furthermore, the object of the invention is to produce a pen which will possess advantages in points of simplicity and efficiency, proving at the same time comparatively inexpensive.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1 is a view in elevation of a pen. Fig. 2 is a longitudinal section with the interior parts in elevation. Fig. 3 is a sectional view with the cap removed and the piston drawn in. Fig. 4 is a perspective view of the feeder and piston with the intermediate parts. Fig. 5 is a sectional view of the valve-casing, piston, and a fragment of the stem.

In the drawings, 1 indicates the body or reservoir, terminating at its upper end in a nipple 2, having a screw-threaded exterior 3

for the reception of the cap 4, which incloses and protects the nipple.

The feed 5 of the pen 6, which has its end seated in the feed; may be of any ordinary construction and need not, therefore, be described in detail. Suffice to say that it has a duct 7, communicating with the interior of the reservoir, for conveying ink to the pen. A stem 8 is formed with or attached to the feed and extends back a considerable distance, preferably to a point near the juncture of the reservoir and nipple, said stem carrying a valve-casing 9. A piston 10 is formed with the valve-casing, said piston fitting against the inner wall of the reservoir and having a hole 11 in its end guarded by a valve 12. A spring 13 has one end leaning against the valve and its opposite end leaning against the valve-stem in order to retain the valve normally seated. Ports 14 lead from the valve-seat 15 to the outside of the valve-casing for permitting the ink to pass into the barrel when the valve is unseated through pressure on the valve-stem when ink is in the reservoir to the rear of the piston. The position of the valve is such that the ports 14 and the hole in the end of the piston are unsealed simultaneously by the action of the valve. A buffer-screw 16 projects within the reservoir to limit the movement of the piston in one direction.

From the foregoing description the operation will be obviously as follows: When it is desired to fill the reservoir with ink, the cap on the nipple is removed and the feeder is drawn out, carrying with it the valve-stem and piston. As the piston passes inwardly the ink will be drawn within the barrel until it strikes the buffer-pin and is arrested. The cap is then screwed on the nipple, and the piston is slowly forced back to its original position. The valve is unseated by the pressure, and the ink passes through the end of the piston and ducts to the interior of the reservoir on the opposite side of the piston and is free to discharge through the feeder to the pen.

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

In a fountain-pen, a reservoir having a nip-

ple, a cap threaded on the nipple, a pen and  
fe der in the opposite end of the reservoir  
and a stem connected to the feeder in combi-  
nation with a valve-casing on the opposite  
5 end of the stem, a piston having a hole in its  
end formed with the valve-casing, ports  
through the wall of the valve-casing leading  
into the reservoir, a valve for controlling the  
hole in the piston and the ports, a spring in  
10 the valve-casing for retaining the valve nor-

mally seated and a buffer-screw depending  
into the reservoir for regulating the draw of  
the piston, as and for the purpose described.

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

CARL FREDRICK MILLER.

Witnesses:

FRED. H. PALMER,  
HERBERT F. LINCOLN.