

E. R. SMITH.  
FOUNTAIN PEN.  
APPLICATION FILED MAY 28, 1906.

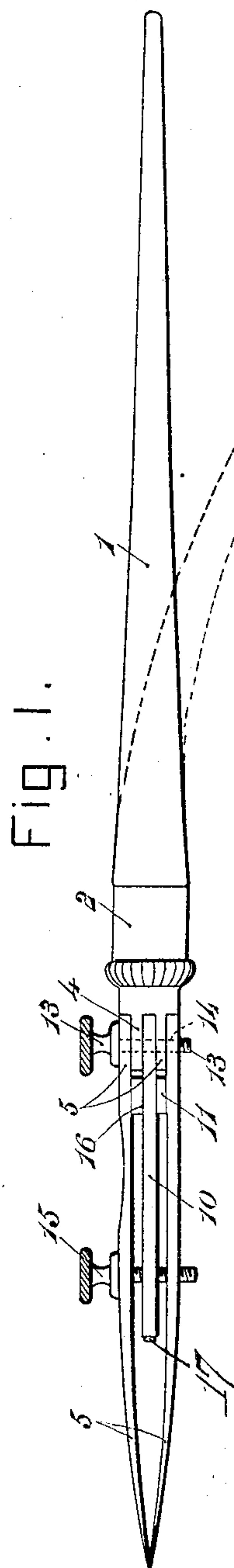


Fig. 1.

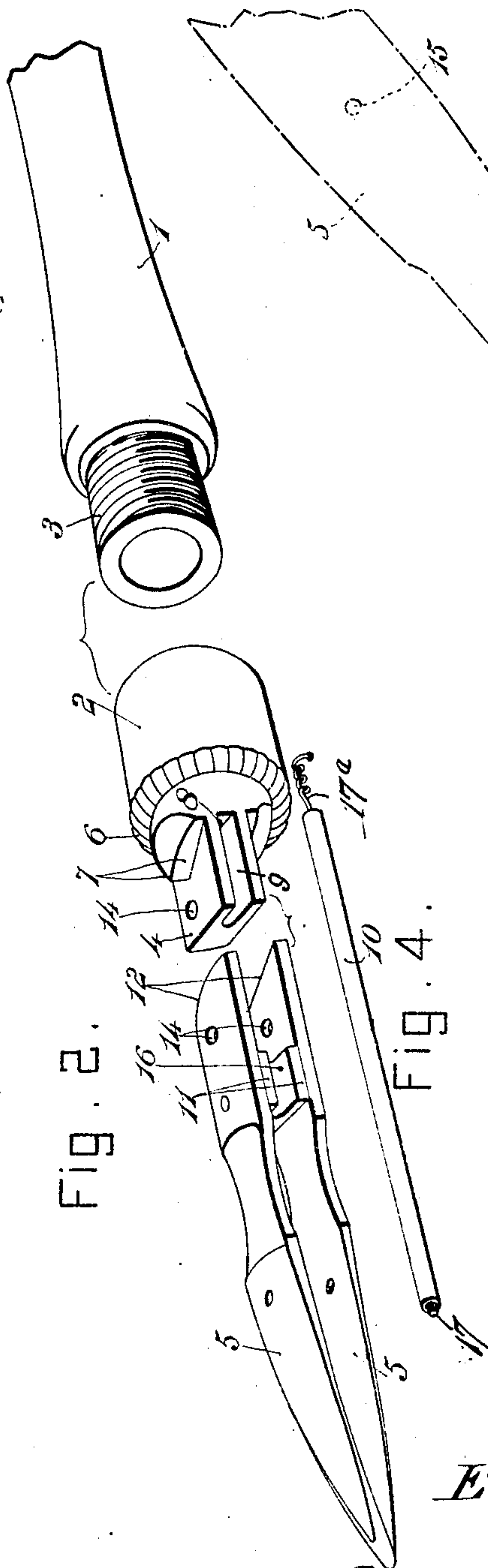


Fig. 2.

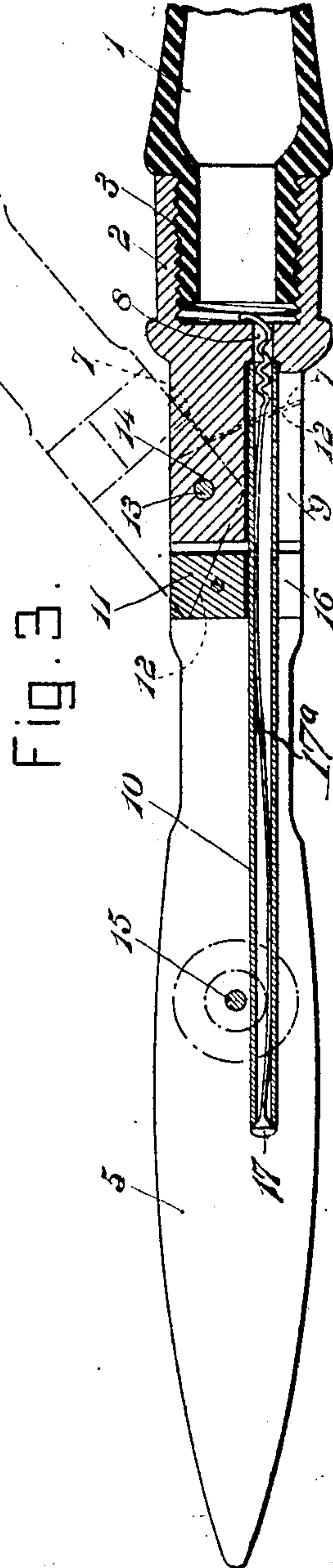


Fig. 3.

Fig. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWIN RUTHVEN SMITH, OF PARIS, TEXAS.

## FOUNTAIN-PEN.

No. 882,179.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed May 28, 1906. Serial No. 319,184.

*To all whom it may concern:*

Be it known that I, EDWIN RUTHVEN SMITH, a citizen of the United States, residing at Paris, in the county of Lamar and State of Texas, have invented a new and useful Fountain-Pen, of which the following is a specification.

This invention relates generally to fountain pens, and more particularly to a novel form of straight line or other drafting pen.

The object of the invention is to facilitate the feeding of ink to the pen blades, and to provide a simple and efficient feeding device for this purpose.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a fountain pen, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in side elevation of a drawing pen constructed in accordance with the present invention. Fig. 2 is a perspective view showing the parts of the pen disconnected and in their relative positions. Fig. 3 is a longitudinal sectional view. Fig. 4 is a perspective detail view of the feeding tube.

Referring to the drawing, 1 designates the tubular ink holding handle of the pen which may be made of any suitable material that will permit of its being flexed for the purpose of forcing ink to the pen points, preferably of gutta-percha. The handle is preferably longitudinally tapered, and is closed at its smaller end, its larger end 3 being exteriorly threaded so as to screw into an internally threaded coupling sleeve or thimble 2 with which the pen blades are assembled.

The coupling 2 comprises, preferably, a metal body bored part way of its length from one end to receive the threaded end 3 of the handle as stated, and the other end of the coupling is rectangular in cross section and forms a tongue 4 to connect with the pen blades 5. The intermediate portion of the coupling is circular in cross section and is provided with a milled bead to facilitate turning relatively to the handle when the coupling is to be detached therefrom or attached thereto, and on the sides of the coupling are inclined shoulders or abutments 7.

As shown in Fig. 3, the coupling is pro-

vided with a passage 8 that extends from the bored end to a groove 9 in one side of the tongue 4, and the passage communicates at its outer end with and discharges through a tube 10. The inner end of the tube is disposed in the groove 9, and is held in place by frictionally engaging with the walls of the passage or screwing into the same as may be preferred.

The pen blades 5 are of the usual construction except that at their shank ends they are riveted to a spacing block 11 which is slightly removed from the shank ends so that the latter may embrace the tongue of the coupling on the shouldered sides thereof. The ends 12 of the blades are inclined to permit them snugly to abut the inclined shoulder 7 of the coupling when the blades are in their normal position. The blades are secured to the tongue 4 by a set screw 13 that passes through apertures 14 in the blades and tongue, one or more of which apertures are threaded. The points of the blades are set by the usual finger-screw 15.

The spacing block 11 is provided with a groove 16 that aligns with the groove 9 in the tongue so as to embrace the feed tube. This tube extends parallel with and between the pen blades and terminates considerably short of the tips of the latter so that the ink escaping from the tube may flow down to the tips of the pen blades, and thus supply quantities requisite to meet the demands of any character of work being executed. The pen blades are jointed to the coupling to permit of their being turned to one side, as indicated by dotted lines in Fig. 3, thus to allow the feed tube to be inserted into an ink well, when the pen is to be charged, without having to insert the blades at the same time. To shift the blades, it is simply necessary to loosen the set screw 13 and thereby unclamp the blades and permit them to be turned on the screw as a pivot, and after the feed tube is charged, the blades are again returned to their normal position.

It may be found desirable to provide means for sealing the discharge end of the feed tube during intervals between feeding of ink to the pen tips, so as to prevent the air from caking or hardening the ink in the tube and thereby closing it. For this purpose, a small knob-shaped valve 17 is provided at the discharge end of the tube that is loosely supported thereat by means of a light spring 17<sup>a</sup> suitably anchored in the



feed tube. This spring has sufficient tension to maintain the valve seated at times when no ink is flowing, but readily yields under pressure on the ink due to the flexing of the handle, as shown in Fig. 1, thereby permitting the valve to open and supply ink to the pen points. The spring is removably held in place by its inner end engaging with the coupling, 2, as shown in Fig. 3, and by this arrangement, the spring can be removed from the tube when it is desired to fill the handle with ink, and is returned after this procedure.

The ink may be supplied to the handle in any preferred manner, as by an ordinary force feed device, somewhat in the nature of a pump, and is discharged from the handle through the tube 10 and past the valve 17 by flexing the handle in the manner above described.

From the foregoing description, the advantages of the invention will be readily seen. The construction is simple and permits of easy manipulation and the filling of the feed tube without removing the blades.

Having thus described the invention what is claimed is:—

1. In a fountain pen, an ink-containing handle, pen blades pivotally mounted with respect to the handle, and a feed tube extending from the handle toward the points of the pen blade to feed ink to the latter and disposed to permit the blades to be moved to one side to allow ink to be supplied to the handle through the feed tube.

2. In a fountain pen, an ink-containing handle, a coupling, a feed tube extending from the coupling and communicating with the handle, and pen blades pivotally mounted on the coupling so as to permit of their

being freely swung away from the filling tube to permit ink to be supplied to the latter.

3. In a fountain pen, an ink-containing handle, a coupling attached thereto and provided with abutments and with a tongue, pen blades pivoted on the tongue and provided with portions to engage the abutments, and a feed tube for supplying ink from the handle to the pen point and which is arranged at one side of the pivot of the blades to permit the latter to be turned away from the tube.

4. In a fountain pen, an ink-containing handle, a coupling attached thereto and provided with abutments and with a grooved tongue, pen blades, a spacing block adjacent to one end of the blades to hold them separated to embrace the tongue of the coupling, a set screw for clamping and pivotally mounting the blades on the tongue, means on the blades for engaging the abutments, and a device mounted in the groove of the coupling for supplying ink to the pen blades.

5. In a fountain pen, a handle, a coupling attached thereto and provided with abutments and with a grooved tongue, pen blades, a spacing block adjacent to one end of the blades to permit the latter to embrace the tongue, a set screw for clamping and pivotally mounting the blades on the tongue, and means on the blades for engaging the abutments.

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

EDWIN RUTHVEN SMITH.

Witnesses:

A. E. PENDER,  
S. B. M. LONG.