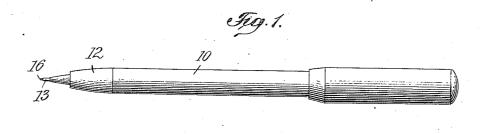
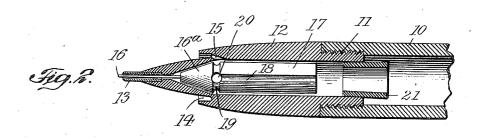
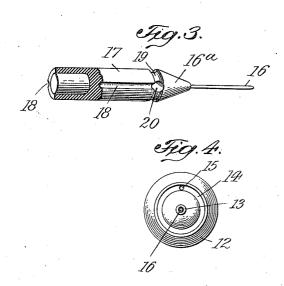
## J. ULLRICH. STYLOGRAPHIC PEN. APPLICATION FILED OCT. 7, 1910.

979,606.

Patented Dec. 27, 1910.







WITNESSES Jelin Front. Kathenyne Koch.

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## UNITED STATES PATENT OFFICE.

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## STYLOGRAPHIC PEN.

979,606.

Specification of Letters Patent. Patented Dec. 27, 1910.

Application filed October 7, 1910. Serial No. 585,780.

To all whom it may concern:

Be it known that I, JACOB ULLRICH, a citizen of the United States, residing at Hoboken, county of Hudson, and State of New 5 Jersey, have invented certain new and userul Improvements in Stylographic Pens, of which the following is a specification.

This invention relates to a stylographic pen of novel construction, and more particu-10 larly to novel and efficient means for supplying the stylo with an ample charge of ink and insuring the necessary air pressure in all positions that the pen may assume during writing.

In the accompanying drawing: Figure 1 is a plan of a stylographic pen embodying my invention; Fig. 2 an enlarged longitudinal section through the lower part there-of; Fig. 3 a perspective view of the ink feed 20 bar, and Fig. 4 an enlarged end view of the nozzle.

To the lower end of the tubular holder 10, is connected by a screw joint 11, a nozzle 12, that carries the usual tubular metal tip 13. 25 The upper section of nozzle 12 overhangs the lower section to form a downwardly opening circumferential groove 14, into which opens a vent 15. The stylo or needle 16, which projects through tip 13 is secured to the lower coniform head 16a of a freely movable feed bar 17, said head finding a bearing against an inner tapering wall of the lower nozzle section. The stem or main body of bar 17, is provided with a suitable 35 number of longitudinal surface grooves 18, two diametrically disposed grooves being shown. At their upper ends, these grooves extend to the top of the bar while their lower ends communicate with a circumfer-10 ential surface groove 19 of the bar formed directly above head 16<sup>a</sup>. Finally there extends through the bar a transverse duct 20, opening at both ends into groove 19 opposite the lower ends of grooves 18. Thus with

two diametrically disposed grooves 18, duct 45 20 is also diametrically arranged, its axis coinciding substantially with a line connecting the grooves. A tubular plug 21 removably fitted into the upper end of nozzle 12, prevents an undue longitudinal movement 50 of the bar, without impairing a free flow of ink from the holder toward the same.

In use, the ink will flow downward along longitudinal grooves 18, and fill circumferential groove 19, as well as duct 20. This 55 groove together with the duct will thus form supply pockets from which the ink is at all times freely delivered over coniform head

16a to the stylo in ample quantity.

The correlation of the parts is such that 60 vent 15 is alined with and opens into circumferential groove 19, so that at all positions of the bar, the air may freely ascend through said groove, and through the then uppermost longitudinal groove 18, into the 65 holder 10, to furnish the necessary pressure.

I claim:

1. A stylographic pen comprising a holder, a nozzle, and a feed bar within the nozzle, said bar being provided with a ta- 70 pering head, a longitudinal groove, a communicating lower circumferential groove, and a transverse duct opening at both ends into the circumferential groove.

2. A stylographic pen comprising a 75 holder, a nozzle, and a feed bar within the nozzle, said bar being provided with a tapering head, a pair of diametrically disposed longitudinal grooves, a communicating lower circumferential groove, and a 80 transverse duct that enters the circumferential groove and connects the lower endered tial groove and connects the lower ends of the longitudinal grooves.

## JACOB ULLRICH.

Witnesses:

Frank v. Briesen. KATHERYNE KOCH.