

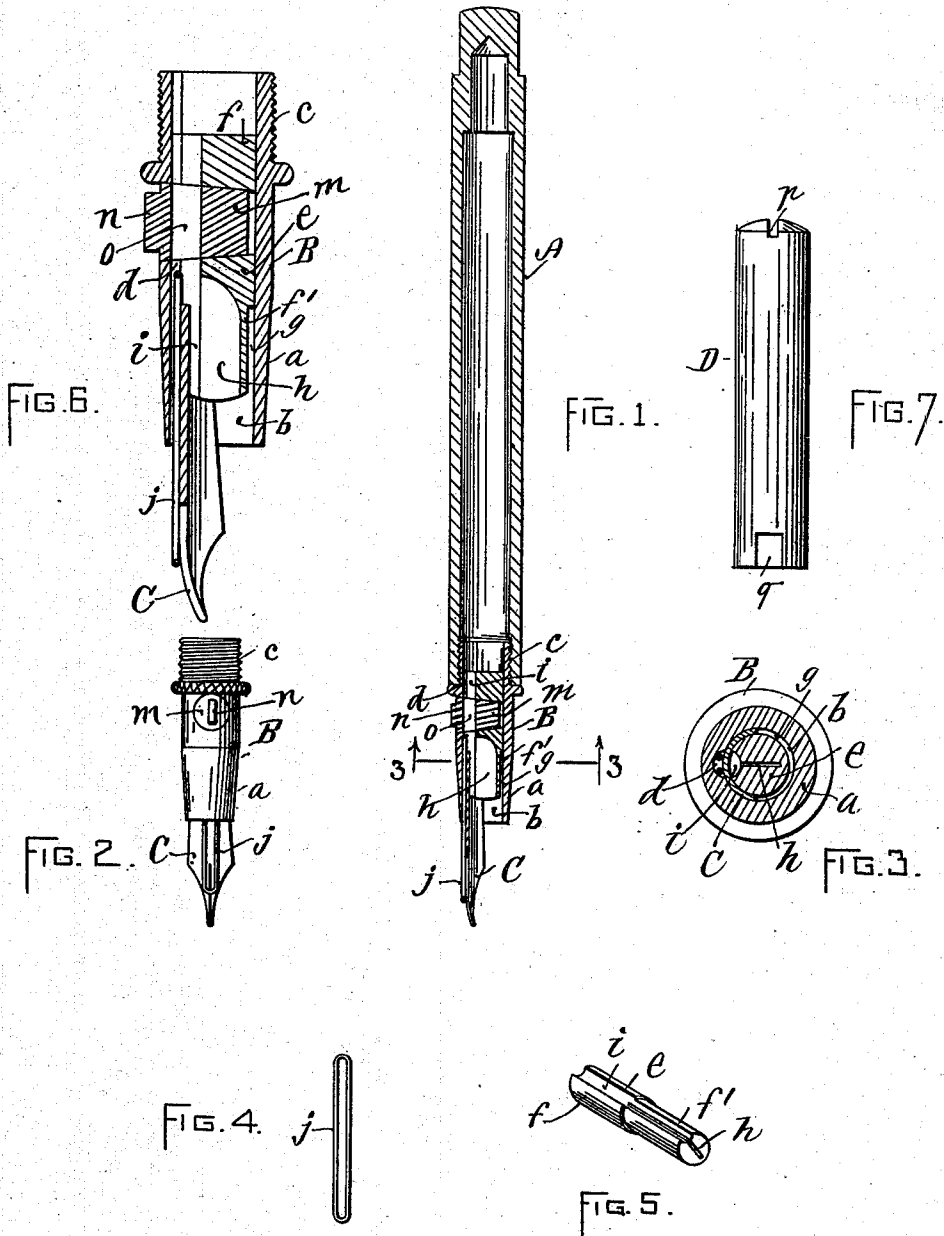
No. 714,283.

Patented Nov. 25, 1902.

A. T. CROSS.
FOUNTAIN PEN.

(Application filed May 20, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 714,283, dated November 25, 1902.

Application filed May 20, 1901. Serial No. 61,182. (No model.)

To all whom it may concern:

Be it known that I, ALONZO T. CROSS, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Fountain-Pens, of which the following is a specification.

My invention relates to an improvement in the construction of the pen-section and of the bar for feeding the ink to the nibs of the pen; and it consists in a pen-section tube provided with an ink-delivering groove made in its wall above the pen, in combination with a concentric grooved plug which forms with the pen-section tube a concentric annular recess adapted to receive the shank of the pen; and it also consists in the combination of the grooved pen-section tube and the concentric grooved plug with the rotary plug for shutting off the flow of ink from the reservoir when the pen is not in use and in the employment of an elongated closed link for the feed-bar above the pen.

In the accompanying drawings, Figure 1 represents a longitudinal section of a fountain-pen provided with my improvement. Fig. 2 represents a side view of the pen-section and a back view of the pen. Fig. 3 represents an enlarged transverse section taken in the line 3 3 of Fig. 1. Fig. 4 represents a side view of a wire link employed as a capillary bar for feeding the ink to the nibs of the pen. Fig. 5 represents a perspective view of the grooved central plug of the pen-section when employed without the rotary plug. Fig. 6 represents an enlarged longitudinal section of the pen-section of the fountain-pen. Fig. 7 represents a side view of the removable cap for covering the pen-section.

In the drawings, A represents the barrel of the ink-reservoir, and B the pen-section, which is connected to the barrel A by means of the screw-thread *c*. The tube *a* of the pen-section is provided with the bore *b*, of uniform diameter, and with the groove *d*, made in the wall of the tube *a* throughout its length, and within the bore *b* of the tube *a* is placed the plug *e*, made of larger and smaller diameters, the larger portion *f* tightly fitting the bore *b* of the tube *a* and its smaller portion *f'* providing with the bore of the tube *a* an

annular space *g* for the reception of the shank of the writing-pen C, a longitudinal slit *h* being made in the plug *e* in order to provide the proper yielding elasticity for holding the pen, the plug *e* being also provided with the longitudinal groove *i*, through which air may pass upward into the ink-reservoir, and ink may flow therefrom to the under side of the pen. The ink-feeding bar *j* is made in the form of an elongated wire link, as shown in Fig. 4, the ends of the wire being connected together, and the said feeding-bar is inserted above the pen into the groove *d*, as shown in Figs. 1, 2, and 3, and may in some cases be made to extend upward into the ink-reservoir. As shown in the drawings, the feeding-bar *j* extends for a short distance beyond the end of the shank of the pen C, and the spring action of the sides of the link-formed feeding-bar will serve to hold the same in its set position within the groove *d*.

In order to provide means for closing the ink-passages formed by the grooves *d* and *i*, so as to prevent leakage from the ink-reservoir when the pen is not in use, I provide the perforated tapering plug *m*, having the elongated projection *n*, by means of which it may be rotated, the perforation *o* of the plug when in the position shown in Figs. 1 and 2 being coincident with the grooves *d* and *i*, so that a free ink-passage will be provided from the reservoir to the pen; but when the plug is turned at a right angle to the position shown in Figs. 1 and 2 the said passage will be closed and the ink will be held in the reservoir without liability of leakage.

The grooves *d* and *i* in the pen-section are made of sufficient size to provide for the ready removal of ink sediment by ordinary means, and a groove *p* is formed across the end of the protecting-cap D of the pen-section for the purpose of turning the plug *m* when required, the open notch *q* being formed at its opposite end to receive the projection *n* of the plug *m* when the cap D is held upon the pen-section.

I do not limit my claims to an ink-feeding bar made in link form, but deem this form to be best suited for the purpose, since the ink flows readily between the parallel sides of the link to the nibs of the pen; but an ink-feeding bar of other construction may be em-

ployed in connection with the longitudinal groove *d*.

I claim as my invention—

- 5 1. In a fountain-pen, the combination of the pen-section tube provided with the longitudinal groove in its wall above the pen, the longitudinal plug held in the bore of the pen-section tube, and provided with a longitudinal groove below the pen, and forming
10 with the bore of the pen-section tube a concentric annular recess adapted to receive the shank of the writing-pen, substantially as described.
- 15 2. In a fountain-pen, the combination of the pen-section tube provided with the longi-

tudinal groove in its wall above the pen, the longitudinal plug held in the bore of the pen-section tube and provided with a longitudinal groove below the pen, and forming with the bore of the pen-section tube a concentric 20 annular recess adapted to receive the shank of a writing-pen, and the transverse rotary plug adapted for closing the ink-reservoir when the pen is not in use, substantially as described.

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Witnesses:

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