(No Model.)

A. T. CROSS.

FOUNTAIN PEN.

No. 595,373. Patented Dec. 14, 1897.

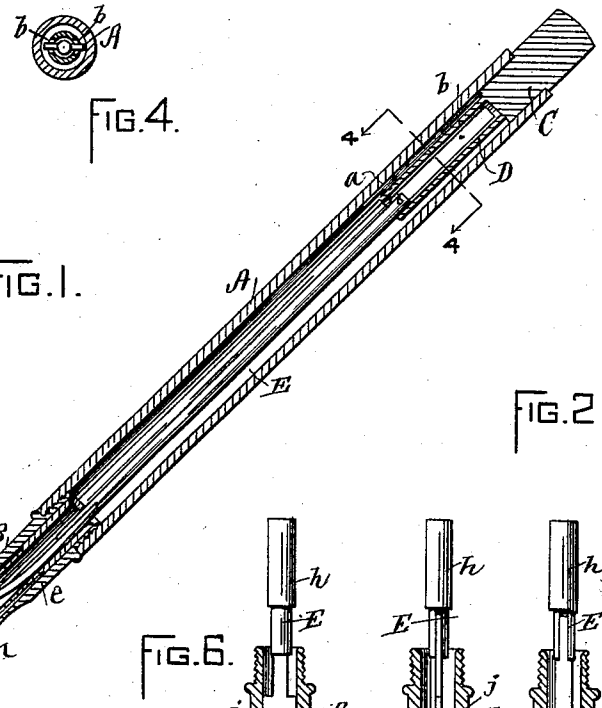


FIG. 4.

FIG. 1.

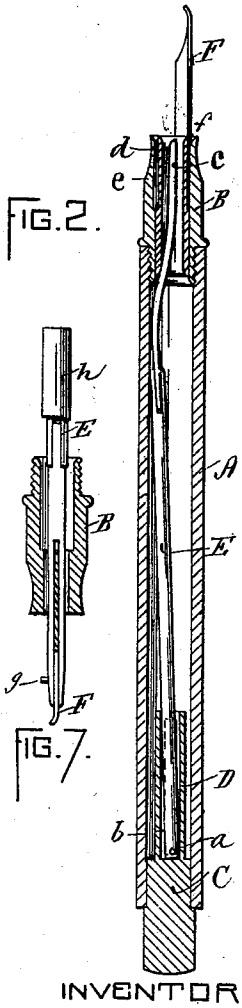


FIG. 2.

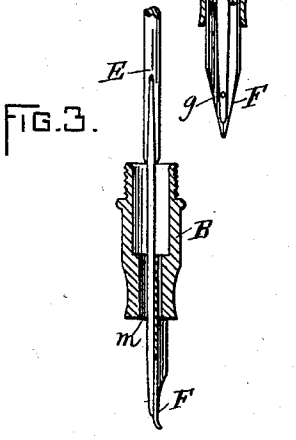


FIG. 6.

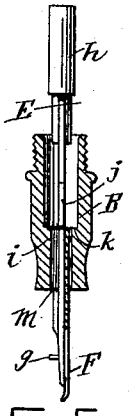


FIG. 5.

FIG. 7.

FIG. 3.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 595,373, dated December 14, 1897.

Application filed September 2, 1896. Serial No. 604,661. (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 that class of fountain-pens in which a common writing-pen is employed; and it consists in the combination of a writing-pen with a loosely-held weighted feed-bar, whereby upon the reversal of the fountain-pen the feed-bar will be carried backward by gravity from the nibs of the writing-pen, so that the ink may then be readily wiped from the pen and will not become dried, as heretofore, between the writing-pen and the feed-bar.

In the accompanying drawings, Figure 1 represents an axial section of a fountain-pen provided with my improvement, the pen being shown in the inclined position for use. Fig. 2 represents an axial section of the fountain-pen in its reversed position in which the feed-bar is withdrawn from the nibs of the pen. Fig. 3 represents a modification in which the feed-bar extends over the upper side of the pen. Fig. 4 represents a transverse section taken in the line 4 4 of Fig. 1. Fig. 5 represents a sectional view in which the weighted feed-bar is connected with the pen-section. Fig. 6 represents a section taken at right angles to that of Fig. 5. Fig. 7 represents the weighted feed-bar as extending upon both the upper and lower sides of the writing-pen.

In the drawings, A represents the ink-reservoir, and B the pen-section. The upper end of the ink-reservoir is closed by means of the plug C, the inner end of the plug being provided with the slotted tube D, within which is loosely held the upper end of the weighted feed-bar E, the said feed-bar being permanently retained in the tube by means of the transverse pin *a*, which passes through the slots *b b* of the tube, as shown in Fig. 4. The upper portion of the feed-bar E is made of metal, and to its lower end is attached the hard-rubber ink-delivering portion *c*, which when in its position for use extends to near the point of the writing-pen F, under the nibs, the pen-section B, as shown in Figs. 1 and 2, being provided with the tube *d*, which serves, with the outer portion *e* of the pen-section, to form an annular opening *f*, adapted to receive and hold the shank of the pen F. When the pen is held in its inclined writing position, as shown in Fig. 1, the ink-delivering portion *c* of the feed-bar E will be held in contact with the nibs and cause by its capillary attraction the proper conveyance of the ink thereto, and when the pen is turned to a reversed position, as shown in Fig. 2, the gravitating feed-bar E will drop, thus carrying the ink-delivering portion *c* away from the under side of the pen at the nibs and leaving the pen free for wiping, if desired. Upon again turning the pen to its writing position a full supply of ink will instantly flow to the nibs, and when the pen-section is closed by its cap and laid away or carried in the pocket with the feed-bar in the position shown in Fig. 2 there will be no danger of an accumulation of dried ink to interfere with the instant proper action of the pen upon the removal of the cap.

A modification is shown in Fig. 3, in which the writing-pen F is located about centrally of the pen-section instead of at one side, and the feed-bar E is made to extend to the nibs over the upper surface of the pen instead of extending along the under surface, the action of the feed-bar upon the reversal of the pen being as before.

In Figs. 5 and 6 the gravitating feed-bar is shown as attached to the pen-section and not attached to the ink-reservoir, and in this case the feed-bar may be guided in its up-and-down movement by the walls of the pen-section, suitable means being provided for preventing the feed-bar dropping out of the pen-section upon the reversal of the pen, a pin *g*, inserted into ink-delivering portion *c*, being shown in the drawings for this purpose. The metallic portion *h* of the feed-bar serves to impart the proper weight to cause the withdrawal of the feed-bar from the nibs and to prevent the feed-bar from floating in the ink, owing to the comparative lightness of the hard rubber of which the ink-delivering portion of the feed-bar is preferably formed. The metallic portion *h* of the feed-bar E shown in Fig. 5 may also be made of small diameter and extended upward in the ink-chamber, so that the plug C will form the stop

for the backward movement of the feed-bar, the downward movement being limited by the shoulders *i i* of the laterally-enlarged portion *j* of the feed-bar, which engage with the annular shoulder *k* of the bore of the pen-section.

In Fig. 7 the weighted feed-bar E, held in the pen-section B, is made to extend to the nibs at both the upper and lower sides of the pen, thus providing an additional flow of ink thereto.

The feed-bar E operates by capillary attraction to draw the ink from the ink-reservoir to the nibs of the pen, and the air required to take the place of the ink thus drawn from the ink-reservoir enters through the opening *m* at the lower end of the pen-section.

I claim as my invention—

1. In a fountain-pen, the combination of the ink-reservoir, the pen-section, and the writing-pen, with the loosely-held weighted feed-bar adapted to drop to its position for use when the fountain is held in its proper position for writing, and to drop away from the nibs of the writing-pen upon the reversal of the fountain, substantially as described.

2. In a fountain-pen, the combination of the ink-reservoir, the pen-section, and the writing-pen, with the weighted feed-bar loosely held in the pen-section and adapted to drop to its position for use when the fountain is held in its proper position for writing, and to drop away from the nibs of the writing-pen upon the reversal of the fountain substantially as described.

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