G. B. MUNN & C. H. MARKER.

FOUNTAIN PEN.

APPLICATION FILED OCT. 16, 1916. RENEWED JULY 17, 1918.

1,294,520. Patented Feb. 18, 1919.

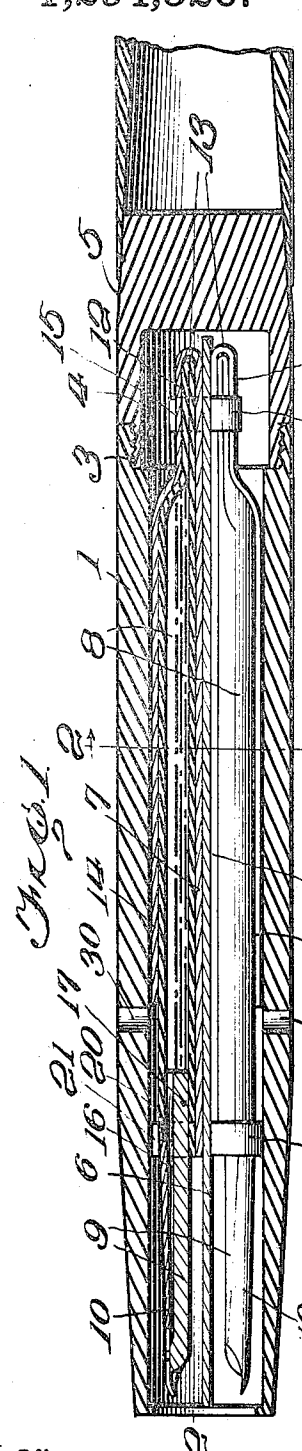


Fig. 1.

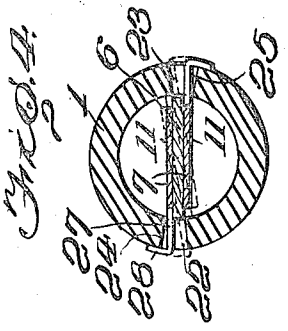


Fig. 4.

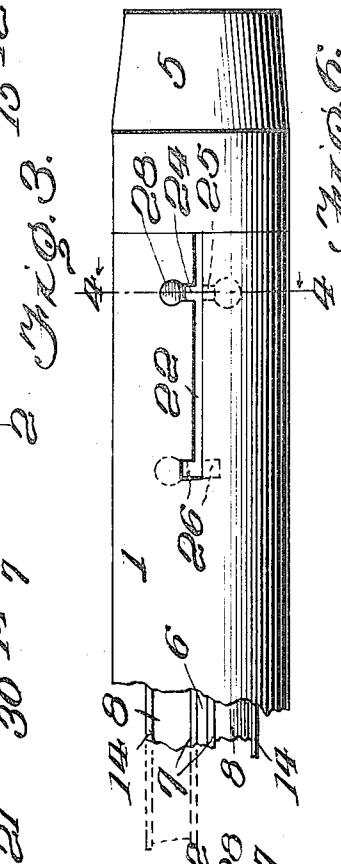


Fig. 3.

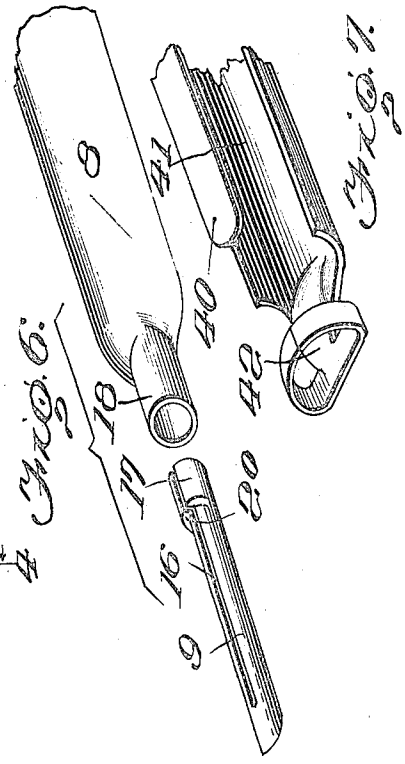


Fig. 6.

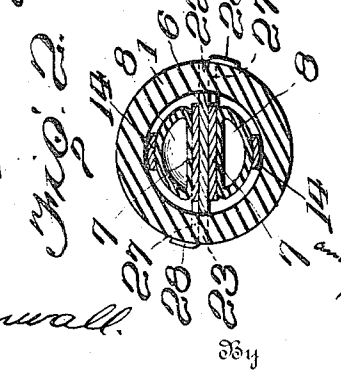


Fig. 2.

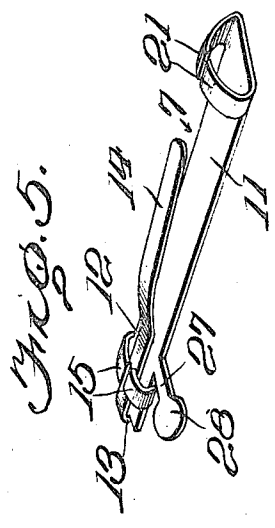


Fig. 5.

Witnesses

Floyd R. Cornwall.

J. K. Moore

Inventors

George B. Munn

and

Christian H. Marker

By Whitaker & Prevost

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE B. MUNN AND CHRISTIAN H. MARKER, OF WARREN, PENNSYLVANIA.

FOUNTAIN-PEN.

1,294,520. Specification of Letters Patent. Patented Feb. 18, 1919.

Application filed October 16, 1916, Serial No. 125,860. Renewed July 17, 1918. Serial No. 245,408.

To all whom it may concern:

Be it known that we, GEORGE B. MUNN and CHRISTIAN H. MARKER, citizens of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Fountain-Pens; and we 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.

Our invention consists in the novel features hereinafter described, reference being had to the accompanying drawing, in which we have illustrated two forms or embodiments of our invention, selected by us for purposes of illustration, and the said invention is fully disclosed in the following description and claims.

Referring to the drawings:—

Figure 1 is a vertical longitudinal sectional view of our preferred form of fountain pen, for writing with differently colored inks.

Fig. 2 is a vertical transverse sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a fragmentary view of the rear end of the pen barrel showing the locking means for holding the ink tubes and pens in either raised or lowered position.

Fig. 4 is a diagrammatic view taken on line 4—4 of Fig. 3 and showing the locking fingers in locked position, in full lines and in unlocked position, in dotted lines.

Fig. 5 is a detail perspective view of one of the stamped and bent supporting members for carrying the ink tubes, ink feeds and pens.

Fig. 6 is a detail perspective view of one of the ink feeds and a portion of one of the rubber ink tubes.

Fig. 7 is a detail perspective view of another form of supporting member for carrying an ink tube, ink feed and pen, in a fountain pen construction for writing with a single colored ink.

One object of our invention is to provide an improved duplex fountain pen having two separate reservoirs adapted to contain different colored inks, and a separate pen for each reservoir which may be moved into or out of the pen barrel with its respective ink reservoir or tube.

A further object is to provide a duplex fountain pen in which the locking of one pen in operative position, will cause the other pen to lock in inoperative position.

A further object of the same is to provide a partition between the pens which will keep the same separated and prevent the ink from one pen, running onto the other.

A still further object of our invention, is to provide an improved supporting means for the pens and their connected parts, which may be stamped or cut from a single sheet of metal.

With the foregoing objects outlined, and with other objects in view, it will be apparent as the nature of the invention is better understood, that the present invention resides in the combination and arrangement of parts, and in the details of construction hereinafter set forth, it being understood that changes in the precise embodiments of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention or sacrificing any of its advantages.

In the embodiment of our invention illustrated in Figs. 1 to 5 inclusive, 1 represents a pen barrel, which is preferably formed of hard rubber or the like, and is provided at its lower end with an inturned flange 2 for a purpose hereinafter mentioned, and said barrel is provided at its upper end with an internally threaded portion 2 for engagement with the external threads 4 of a cap 5.

Mounted in said barrel 1 and prevented from moving but a slight distance longitudinally of the barrel, by the flange 2 and cap 5, is a partition plate 6, which is the same width as the internal diameter of the pen barrel and is freely rotatable in said barrel.

Mounted in said pen barrel on each side of said partition plate 6, is a supporting member 7, which carries a flexible ink tube 8, an ink feed 9 and a writing pen 10, the tubes on the opposite sides of the partition plate being adapted to hold different colored inks, for instance, red and black.

Each of the supporting members 7 is formed of a single sheet of metal cut to the form shown in Fig. 5, and having a flat portion 11, which lies adjacent the partition plate 6 and is adapted to be rotated with and slide on the same. The members 7 are reduced in width, as shown at 12, and bent upon themselves at 13, to

secure the upper ends of the flexible ink tubes 8 to them, and to form spring tongues 14, which are adapted to be forced toward the flat portions 11 for compressing the ink tubes to fill the same. The reduced portions 12 are held in engagement with the upper ends of the ink tubes 8 by clips 15, which are integral with the flat portions 11 and are bent over upon the reduced portions 12.

The ink feeds 9 are preferably formed of hard rubber and have the usual ink ducts 16 and enlarged heads 17, which are inserted in the necks 18 of the ink tubes. The pen points 10 lie upon the ink feeds in the usual manner and their upper ends abut against shoulders 20 formed by enlarging the heads of the ink barrels. The ink feeds 9 are held in the necks of the tubes 8 and the pens 10 are secured to the ink feeds by means of clips 21, which are integral with the flat portions 11 of the supporting members 7, and are bent over the parts mentioned, as shown in Fig. 1.

From an inspection of Fig. 1, it will be seen that the pens, when not in use, rest entirely within the barrel 1 and that the partition plate 6 separates said pens and prevents the ink from one pen passing to the other, so that each pen writes only the color of the ink which is contained in its respective ink tube.

When it is desired to use either one of the pens, it is necessary that the same should be brought to position below the barrel and this we provide for in the following manner.

The pen barrel 1, as best shown in Figs. 3 and 4, is provided on opposite sides with longitudinal slots 22 and 23, which open upwardly at the top of the pen barrel 1, for a purpose hereinafter described. Circumferentially extending notches 24 and 25 are provided in the barrel 1 near its upper end and merge into the slots 22 and 23, both of said notches being cut in the same circumferential direction from their respective slots. The barrel 1 also has similar notches 26 which merge into the lower ends of the slots 22 and 23. Integral with each of the supporting members 7 is an arm 27 carrying at its outer end a finger engaging portion 28, and the arms pass through the slots 22 and 23 and are adapted to enter the notches 24 and 25 for securing the pens and their connected parts in upper or inoperative position, or to enter the notches 26 for securing the pens in lower or operative position.

In assembling the pen, the partition plate 6 is first inserted in the pen barrel 1 until its lower end rests on the flange 2, then the supporting members 7 carrying their respective ink tubes 8, ink feeds 9 and pens 10, are inserted in the barrel 1 on opposite sides of the partition plate 6. As the supporting members pass into the barrel 1, their respective arms 27 enter the upper ends of the slots 22 and 23. When the supporting members 7 have been inserted a sufficient distance into the barrel, the cap 5 is screwed on and this holds the parts within the pen barrel 1, and closes the upper ends of the slots 22 and 23.

From the drawings, it will be seen that the clips 21 when taken with the partition plate 6 form in effect a ring which is of slightly less circumference than the interior of the barrel 1, to provide frictional guides for the lower ends of the supporting members 7. The spring tongues 14, which may be forced inwardly to fill the tubes by inserting an instrument through the openings 30 in the pen barrel, also bear against the interior of the barrel 1 and assist in guiding and steadying the supporting members 7 and their connected parts.

In practice we propose to color the finger engaging member 28 of the red ink supporting member 7, red and the finger engaging member of the black ink supporting member, black. In operation, assuming that the pens are in inoperative position, if it is desired to use the black ink pen, you may do so, by pushing the black finger engaging member 28, out of its notch 24 and into the slot 22. This causes both supporting members 7 and the partition plate 6 to rotate slightly in the pen barrel 1 and also causes the red finger engaging member to move out of its locking notch 25. Then by forcing the black finger engaging member 28 downwardly in its slot 22, the black ink pen will be forced downwardly below the lower end of the barrel 1, but the red ink pen will remain stationary, owing to the friction set up by its clips 21 and spring tongue 14. When the arm 27 of the black finger engaging member 28 reaches the lower end of the slot 22, the black finger engaging portion is rotated slightly to cause its arm 27 to enter the notch 26 for locking the black ink pen in operative position, and this movement also causes the arm 27 of the red ink finger engaging portion, to move back into its locking notch 25 to lock the red ink pen in inoperative position. It is obvious that the red ink pen may be operated in a similar manner by operating the red ink finger engaging member.

In the modification shown in Fig. 7, we propose to employ a pen barrel similar to the one shown in Fig. 1, except that we provide a slot and locking notches in one side of the barrel only. We also leave out from this construction, the partition plate 6 and employ only one supporting member 40, which is made exactly the same as that shown in Fig. 5, except that the part 11 is shown as a half sleeve 41, having its forward end cut away and bent up to the same height as the longitudinal edges of the half sleeve, as

shown at 42. The ink tube, ink feed and pen point are secured to this modified supporting member in a manner similar to that shown in the other figures. When this supporting member is inserted in the pen barrel, the half sleeve 41 and the spring tongue 43 frictionally engage the interior of the pen barrel and prevent the same from moving except when operated by its finger engaging member (not shown). This modification is designed to use but a single colored ink.

From the foregoing, it will be apparent that we have devised an improved form of fountain pen which may be used with one or more differently colored inks and which is of such simple and practical construction, that the same may be manufactured at a small cost.

What we claim and desire to secure by Letters Patent is:—

1. A fountain pen comprising a pen barrel provided with a longitudinally extending slot and circumferentially arranged notches which merge into said slot, a plate rotatably mounted in said barrel, a supporting member slidably mounted on said plate and composed of a single sheet of metal bent upon itself to form a spring tongue, an ink tube secured to the supporting member by the bent portion of the same and arranged to be compressed by said tongue, integral clips provided on said supporting member, an ink feed and pen secured to the ink tube by said clips, and an operating arm provided upon said supporting member and extending through said slot for rotating said member and plate and for sliding said member into operative and inoperative positions.

2. The combination with a fountain pen having an ink tube, an ink feed, and a pen, of a supporting member composed of a single sheet of metal bent upon itself to engage the rear end of the ink tube and to form a spring tongue to compress said tube when pressure is exerted on the tongue, and clips provided at the forward end of said member for securing the ink tube, ink feed and pen together.

3. A fountain pen comprising a pen barrel provided with oppositely disposed longitudinally extending slots and circumferentially arranged notches which merge into said slots, a partition plate rotatably mounted in said barrel, a supporting member mounted on each side of said partition plate and being adapted to slide on the same, operating arms provided upon said supporting members and extending through said slots for rotating said members and said partition and sliding said members into operative and inoperative positions, and an ink reservoir, ink feed and pen carried by each of said supporting members.

4. A fountain pen comprising a barrel provided with oppositely disposed longitudinally extending slots and with upper and lower circumferentially arranged notches which merge into said slots, a partition plate rotatably mounted in said barrel, supporting members slidingly mounted in said barrel between said partition plate and the interior wall of said barrel, operating arms provided upon said supporting members and extending through said slots and having finger engaging members for rotating and sliding said supporting members, and an ink tube, an ink feed and a pen carried by each of said supporting members and being adapted to be lowered into operative position or raised into inoperative position by said finger engaging portions.

In testimony whereof we affix our signatures.

GEORGE B. MUNN.
CHRISTIAN H. MARKER.