W. L. CHAPMAN.

FOUNTAIN PEN.

APPLICATION FILED DEC. 22, 1917.

1,312,681. Patented Aug. 12, 1919.

FIG. 1

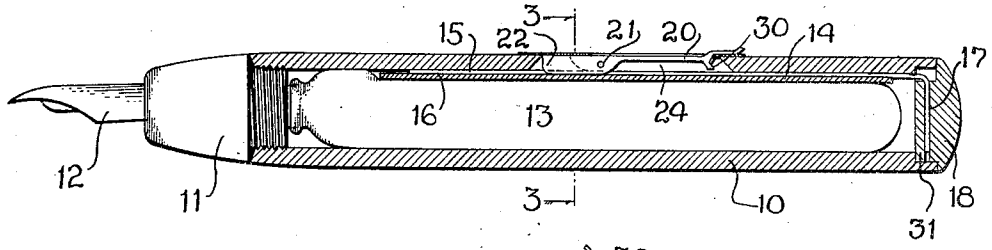


FIG. 2

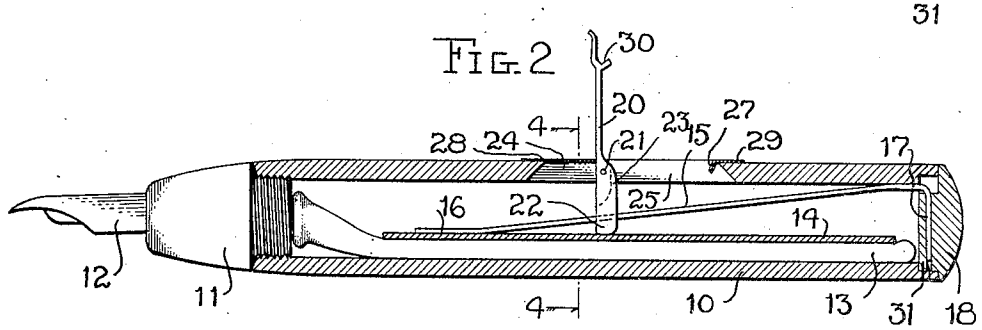


FIG. 3

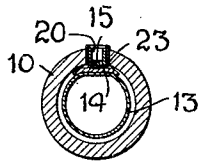


FIG. 5

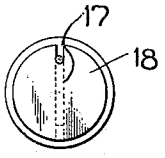


FIG. 4

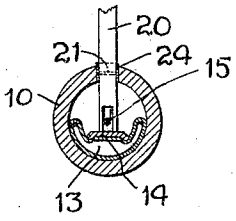


FIG. 6

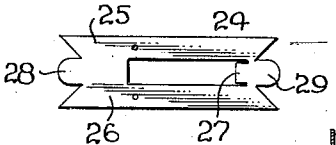


FIG. 7

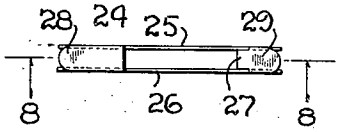
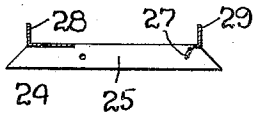


FIG. 8



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FOUNTAIN-PEN.

1,312,681. Specification of Letters Patent. Patented Aug. 12, 1919.

Application filed December 22, 1917. Serial No. 208,370.

To all whom it may concern:

Be it known that I, WILLIAM L. CHAPMAN, a citizen of the United States of America, and a resident of the borough of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Fountain-Pens, of which the following is a specification.

This invention relates to improvements in fountain pens of the so-called self-filling type, and more particularly to a self-filling fountain pen wherein the usual ink sack is compressed by the operation of a lever located in a slotted opening in the barrel of the pen.

The principal object of the invention is to provide a pen of the type designated which may be easily and economically manufactured, which will be free from complications, which may be readily assembled, and which will be simple and efficient in operation.

In the accompanying drawings I have shown a preferred embodiment of my invention for purposes of illustration, and therein—

Figure 1 is a view partly in longitudinal section and partly in elevation;

Fig. 2 is a similar view with the parts in a different position;

Fig. 3 is a cross section on the line 3—3 of Fig. 1;

Fig. 4 is a cross section on the line 4—4 of Fig. 2; and

Figs. 5, 6, 7 and 8 are detail views later to be referred to.

Referring to the drawings, the pen comprises the usual barrel 10 internally threaded to receive the nib 11 carrying the pen point 12. The nib 11 is suitably channeled so that ink may be fed down to the pen point from an ink sack 13, preferably made of rubber, which is attached thereto and normally disposed within the barrel. A guard member 14 is disposed within the barrel and normally retained against the upper surface thereof by a spring 15 which is attached to the guard by brazing or otherwise at 16 and extends rearwardly of the pen where its rear end lies within a transverse bore 17 formed in a plug 18 and retained therein by friction.

Suitable means are provided for forcing the guard 14 downwardly against the spring tension to collapse the ink sack prior to the filling operation, such means being herein shown as a lever 20 pivoted at 21 and adapted to be rotated about the pivot as will be later described. The lower end 22 of the lever 20 is bifurcated as shown in Fig. 4 and the lever is also provided with a groove 23 within which the spring rests when the parts are in normal position as shown in Fig. 1.

The lever 20 passes through a slot formed in the side of the barrel 10, this slot being framed by a member 24 shown in Figs. 6, 7 and 8 which constitutes a lever mounting. The end walls of the slot are beveled outwardly toward the inner surface of the barrel as shown in Figs. 1 and 2.

The slot framing member may be made from a blank of sheet metal stamped out in accordance with the showing of Fig. 6. This blank has two side or wing portions 25 and 26, which have beveled ends of substantially the same bevel as that given to the ends of the slot in the barrel. The central part of the blank is cut out with the exception of a spring catch member 27. End tabs 28 and 29 are provided to retain the framing member in place as will be hereafter more fully described. The sides or wings of the framing member are bent downwardly as shown in Fig. 7, the end tabs are bent upwardly as shown in Fig. 8, and the spring catch member 27 is bent downwardly into the opening between the wing portions. Thereafter the lever 20 may be assembled with the framing member by passing its pivot pin 21 through the sides thereof.

Means are provided for retaining the lever securely in inoperative position to minimize the danger of accidental compression of the ink sack; such means being herein shown as the spring catch member 27 which coöperates with the cam surface 30 on the outer end of the lever. When the lever is being rotated from the position shown in Fig. 2 to the position shown in Fig. 1, the cam member 30 will contact with the spring catch member 27, and when in the position of Fig. 1, will snap past the projection and bear against the cam surface 30 of the projection. When it is desired to raise the lever from the position shown in Fig. 1, the spring catch member 27 will be bent to the right by the cam surface 30.

The pen as a whole is preferably assembled as follows: The lever and slot framing member having been assembled as a unit they are inserted in the barrel and pressed

outwardly through the slot, the tabs 28 and 29 then being in the position shown in Fig. 8. Thereafter the tabs are bent downwardly and the side members 25 and 26 are locked securely in the slot, their beveled ends contacting with the beveled edges of the slot. This construction is advantageous because the principal strain on the lever and slot framing member tends to force it outwardly and the beveled surfaces operate to retain it in place. Thereafter the plug 18 with the spring 15 and guard member 14 attached thereto is pushed into the barrel so that the spring lies in the slot 23 of the lever 20 as shown in Fig. 1. The plug 18 may be suitably fastened in the barrel either by friction or by pins 31 shown in Figs. 1 and 2. Thereafter the pen point, nib and ink sack may be inserted in the usual way.

In operation the ink sack may be filled by raising the lever 20 to the position shown in Fig. 2. This compresses the ink sack and expels the air therefrom. The pen 12 may then be placed within a supply of ink, the lever 20 returned to the position of Fig. 1 and the ink sack permitted to expand to fill the sack with ink.

It is to be understood that the present invention may be variously modified and embodied within the scope of the subjoined claims.

I claim as my invention:

1. In a fountain pen of the character described, the combination of a collapsible ink sack; a barrel inclosing the sack; a lever projecting into the said barrel through a slotted opening therein, said slotted opening having beveled end walls flaring inwardly; and a lever mounting member adapted to coöperate with said beveled end walls to resist outward pressure thereon.

2. In a fountain pen of the character described, the combination of a collapsible ink sack; a barrel inclosing the sack; a lever projecting into the said barrel through a slotted opening therein; said slotted opening having beveled end walls flaring inwardly; a lever mounting member adapted to coöperate with said beveled end walls and further adapted to be inserted in said slot from the interior of said barrel and having tabs bent down on the outside of the barrel to retain the mounting member in position.

3. In a fountain pen of the character described, the combination of a collapsible ink sack; a barrel inclosing the sack; a lever projecting into the said barrel through a slotted opening therein; a lever mounting member to which said lever is pivoted; said lever mounting member having an excess of material bent inwardly from the end of the mounting to coöperate with said lever and form a spring catch for retaining the lever in inoperative position.

In testimony whereof, I have signed my name to this specification this 20th day of December, 1917.

WILLIAM L. CHAPMAN.