

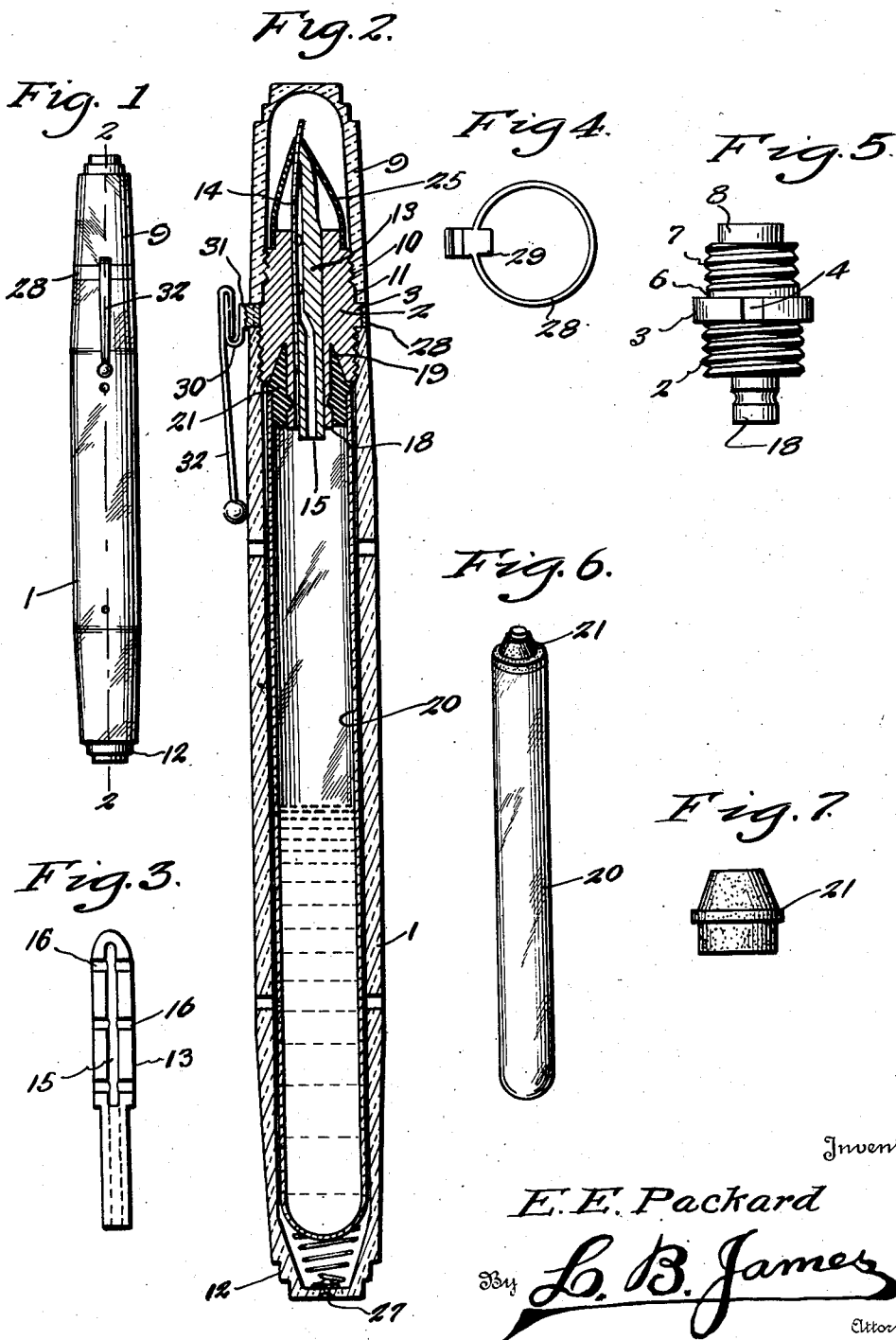
March 4, 1941.

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2,233,846

FOUNTAIN PEN

Filed April 20, 1940



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2,233,846

FOUNTAIN PEN

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Application April 20, 1940, Serial No. 330,757

1 Claim. (Cl. 120—42)

This invention relates to fountain pens, the general object of the invention being to provide means whereby a capsule, filled with ink by a manufacturer, can be easily inserted into the barrel of the pen and the interior thereof placed in communication with a feeding part leading to a nib or point by the user and without soiling his hands or requiring the use of tools and without the use of sacks, pump parts, etc., as are required in pens as now formed.

The invention also consists in certain other features of construction, combination and arrangement of the several parts, to be used hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Fig. 1 is an elevational view of the improved pen.

Fig. 2 is a section on line 2—2 of Fig. 1.

Fig. 3 is a view of the feeding device.

Fig. 4 is a view of the ring which carries the holding clip.

Fig. 5 is a view of the plug member which carries the point or nib and to which the capsule is to be connected.

Fig. 6 is a view of the capsule.

Fig. 7 is a view of the nipple for the capsule.

In these views, the numeral 1 indicates the barrel of the pen and the numeral 2 indicates a plug member threaded into the open end of the barrel. This plug member has a collar 3 surrounding an intermediate part thereof which has a notch 4 therein for a purpose to be described. This collar abuts the end of the barrel, as shown in Figs. 1 and 2 and said plug member has a part projecting from the barrel formed with a cylindrical part 6, a threaded part 7 and a reduced cylindrical part 8. A cap 9 is provided for enclosing the point carrying parts and said cap is interiorly threaded as at 10 for engaging the threaded part 7 of the plug member and a smooth end part 11 for engaging the smooth part 6 and this smooth part 11 will frictionally fit a reduced part 12 at the rear end of the barrel, when the cap is placed on this end of the barrel when the pen is in use.

The plug number 2 has a bore therethrough for receiving the feeding member 13 and a part of the nib or point 14. This feeding member is of substantially conventional form and is formed with the usual passage 15 and it may be provided

with the grooves or slots 16. Its inner end is reduced to pass through the reduced tubular part 18 at the rear or inner end of the plug member. A conical recess 19 is formed in the rear end of the plug member and this recess surrounds the forward part of the reduced tubular part 18.

The capsules 20 are filled with ink by a manufacturer of ink and the user of the pen buys these capsules for insertion in his pen. Each capsule has a rubber nipple 21 fitted fluid tight in its open end. This nipple has a conical outer end and it is sealed immediately after the capsule is filled.

After the seal has been removed the nipple is forced over the reduced tubular part 18 and the conical part of the nipple is forced tightly into the conical recess 19 so that a fluid tight joint is formed between the capsule and the plug member. The tubular member 18 may be grooved as shown to receive a part of the rubber nipple to increase the sealing effect.

When the capsule has been so connected with the plug member the ink will flow from the capsule through the feeding member to the point or nib and in order to keep the point or nib at the outer end of the feeding member from drying out when the pen is being used or is lying unused without the cap thereon I provide a small cap 25 which fits tightly on the part 8 of the outer part of the plug member and has a small hole in its small and outer end for the passage of the point of the nib.

A spring 27 is located in the rear end of the barrel and presses against the closed end of the capsule. This spring prevents the capsule from becoming loose when the pen is jarred by being carried or dropped.

A ring 28 surrounds the collar 3 and has an interior projection 29 for engaging the notch 4 to prevent turning movement of the ring on the collar. A substantially U shaped spring 30 has one limb connected to an exterior projection 31 on the ring and a holding clip 32 is connected to the outer limb for holding the pin in the pocket of a garment. The clip 32 is centered directly above the nib so that when the pen is in use the clip will be between the thumb and the forefinger gripping the pen. As the clip is permanently attached to the pen proper at this point it provides a grip for unscrewing the cap barrel and also prevents the rolling of the pen when the pen is placed on a slightly inclined surface. The spring 30 acts to press the ball of the clip against the barrel and allows the ball to be raised from the barrel when the barrel is being un-

screwed. It also makes the ball grip the clothing more securely. The capsule as well as the barrel and its cap are preferably made of transparent material such as "Pyralin."

5 It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

10 It is to be understood that changes may be made in the construction, combination and arrangement of the several parts, provided such changes fall within the scope of the appended claim.

15 Having thus described my invention what I claim and desire to protect by Letters Patent is:

A fountain pen comprising a transparent barrel, a plug member fitting in the open end of the barrel, a feeding member and nib carried by the plug member and projecting from the outer end thereof with the feeding member projecting from the inner end of the plug member, a capsule containing ink fitting in the barrel and having an outlet removably fitting over the last mentioned end of the plug member, a removal cap enclosing the projecting end of the plug member and the nib and a cap fitting over the outer end of the plug member and having a hole in its outer end for passage of the tip end of the nib there-through.

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