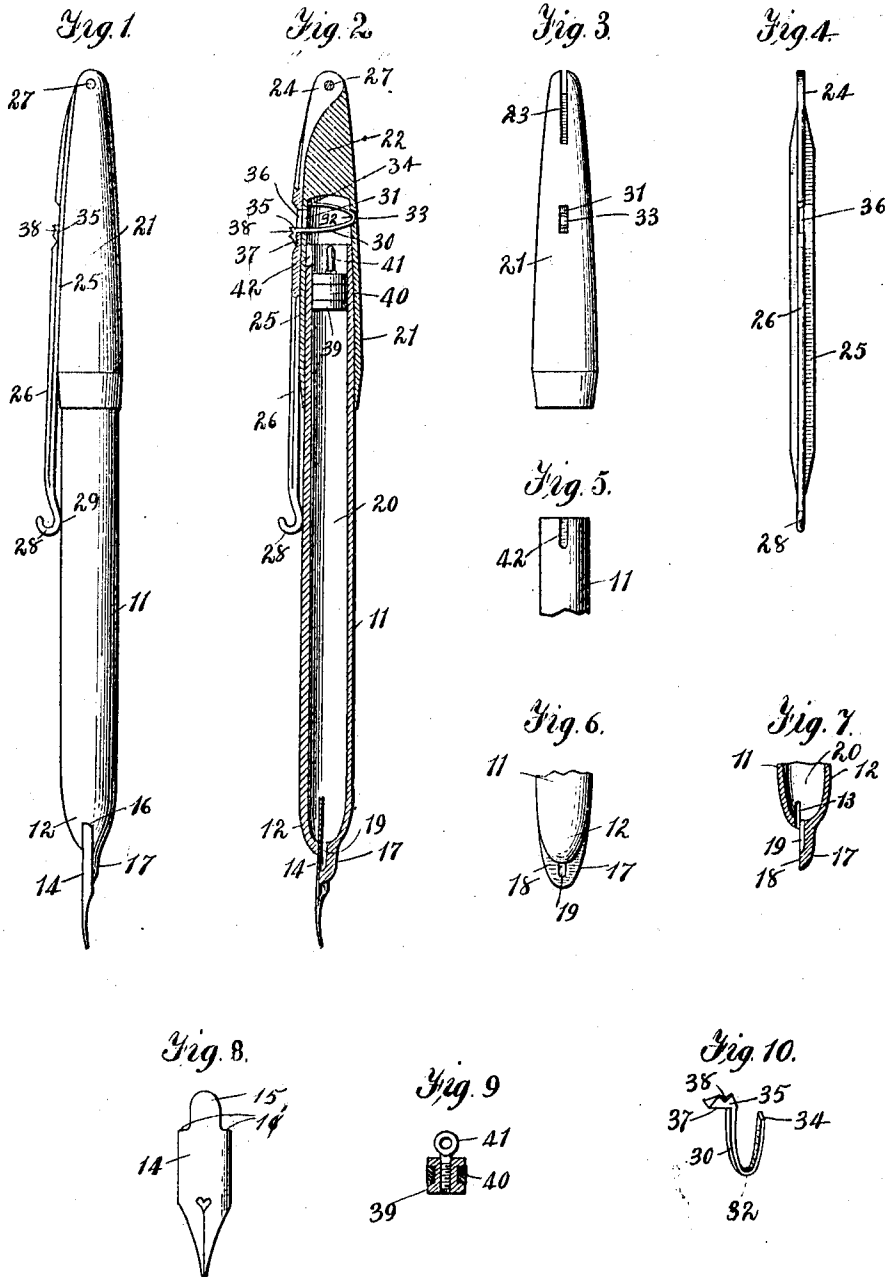


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 FOUNTAIN PEN.
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989,041.

Patented Apr. 11, 1911.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES PETERSEN, OF ENGLISH LAKE, INDIANA.

FOUNTAIN-PEN.

989,041.

Specification of Letters Patent. Patented Apr. 11, 1911.

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To all whom it may concern:

Be it known that I, CHARLES PETERSEN, a citizen of the United States, residing at English Lake, in the county of Starke and State of Indiana, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

My invention relates to fountain pens and has especial reference to that type in which the pen is provided with mechanism whereby a fresh supply of ink may be drawn into the reservoir, such articles being commonly known as self-filling pens.

The chief objects of the improvements which form the subject matter of this application for patent are:—to provide a self filling fountain pen that will be simple in construction, effective in the operation of charging the reservoir with a fresh supply of ink, and so constructed that the filling devices will be durable, easily understood, and convenient to operate.

Further objects of the invention, referred to more in detail, are:—to furnish a positive mechanism for forcing the ink into the reservoir by atmospheric pressure, to provide a safety clip having the additional function of serving as the operating lever for the filling member, and to produce a fountain pen having an effective feed that will insure that the proper amount of ink is at all times supplied to the pen nib.

I accomplish the desired objects by means of the devices illustrated in the accompanying drawing, which forms a part of this application, the various details of construction being disclosed in the following views:—

Figure 1 is a side elevation of the complete instrument; Fig. 2 is a vertical longitudinal section; Fig. 3 is a side elevation of the cap, with the safety clip and spring removed; Fig. 4 is a front elevation of the safety clip; Figs. 5 and 6 are fragmentary views showing the upper and lower ends, respectively, of the barrel; Fig. 7 is a fragmentary view, showing the lower end of the barrel in longitudinal section; Fig. 8 is a rear elevation of the pen point used in connection with the barrel; Fig. 9 is a vertical section of the filling piston, and Fig. 10 is a perspective view of the clip retaining spring.

Referring to the details of the drawing, the numeral 11 indicates a cylindrical barrel, open at the top and having its lower

end 12 contracted and provided with a slot 13 for the insertion of a pen 14. The upper end 15 of the pen is reduced forming shoulders 16 which engage the margins of the said slot 13, thus forming stops to properly locate the member relatively to the feeding mechanism. The feeding parts comprise a beak 17 which is a reduced extension of the barrel walls, and is furnished upon one side with a flat face 18 which is adjacent the slot 13 and is provided with a groove 19. This groove communicates at one end with the bore 20 of the barrel, the lower end terminating short of the end margin of said face 18, as shown in Figs. 6 and 7. The upper open end of the barrel is normally closed by a cap 21, which telescopes over the said open end and extends downward to a sufficient distance to afford a firm connection when thus engaged, the cap being readily removable for the purpose of filling the bore 20 with ink.

The upper end 22 of the cap is solid except for a slot 23 in which is inserted the upper end 24 of a clamping lever or safety clip 25, which normally lies alongside the cap and barrel in the relative position shown in Figs. 1 and 2. This clip or lever comprises a flat metal strip which is reinforced along the median line of the outer surface by a rib 26 and this merges above into the flattened end 24, the latter being secured in the slot 23 by a pivot pin 27. The lower end of the clip terminates in an outwardly turned hoop 28 which lies in close proximity to the outer surface of the barrel, as indicated at 29, and serves to engage the margin of a pocket or other convenient portion of a garment for the purpose of preventing the instrument from becoming lost, a sufficient resiliency being provided by the metal clip to facilitate this clamping function. The said clip is normally held in the position shown by means of a U-shaped spring 30, which is placed within the interior of the cap 21 through a slot 31. The bent mid-portion 32 of the spring is lodged in a hole 33 formed in the wall of the cap opposite to the said slot 31, said hole being countersunk upon the inside of the cap to form a suitable seat for the said bend. When in position the end 34 of the spring will expand so as to engage beneath the wall of the cap, as shown in Fig. 2, and thus retain the spring in position when once inserted. The opposite end of the spring

projects slightly and is formed into a head 35 which protrudes through the slot 31 and a slot 36 in the clip. A hook 37 engages the wall of the clip adjacent the slot 36 to hold the clip in place, as shown in Fig. 2, a notch 38 being provided for the insertion of the finger nail, or a suitable implement, when it is desired to compress the spring to release the clip.

10 Within the bore 21 of the barrel is slidably arranged a piston 39, furnished with a suitable packing ring 40. I prefer to form this piston of hard rubber and make the ring of soft rubber to insure a proper fit and insure an effective action of the piston without producing a friction which would prevent the device from working smoothly. This piston is provided with a screw-eye 41, which is inserted into an axial hole in said piston, and serves as an attachment for the hook end 28 of the clip 25, by means of which the piston is operated to fill the barrel, the manner of using it for this purpose being as follows:—The piston 25 stands normally near the upper end of the barrel, as shown in Fig. 2, and when the reservoir becomes empty of ink, the cap 21 is removed, and the clip released by compressing the spring with the finger nail, which engages the notch 38. The hook 28 is then made to engage the screw-eye 41, and to facilitate this procedure, the upper end of the barrel is furnished with a marginal slot or slit 42, the special advantage 35 being that the piston can thus be reached when it is below the upper end of the barrel. Having thus engaged the screw eye with said hook, the piston is then pushed to the bottom of the cavity. The lower end of the barrel is now dipped into the ink supply and the piston carefully drawn back by means of the engaged clip to the initial position at the upper end of the barrel, the ink being drawn by way of the groove 19 40 into the reservoir 20, so that the latter will be entirely filled below the piston. Disengaging the hook from the screw eye, the clip is folded alongside the cap as before, where it will be automatically secured by

the spring. The cap is then replaced upon the barrel, when the pen is ready for use. 50

Having thus described my invention, what I claim as new is:—

1. In a fountain pen, the combination with a barrel, and a piston therein, of a cap for said barrel, a slot in said cap, a lever pivoted in said slot and adapted to be folded parallel with the cap, a hook on said lever, and a spring catch for retaining said lever in its folded position. 55 60

2. In a fountain pen, the combination with a barrel, and a piston therein, of a cap for the barrel, a slot in said cap, a lever pivoted in said slot and adapted to be folded upon said cap, a spring arranged in said cap and projecting through an opening in the side of the cap, and a lug on said spring adapted to engage said lever when in folded position. 65

3. In a fountain pen, the combination with a barrel, a piston in said barrel, of a slotted cap for the barrel, a lever pivoted at one end in the slot in said cap and adapted to be folded upon the cap, a hook on the opposite end of the lever adapted to engage a suitable aperture in the piston to operate the latter, and means for retaining the lever in folded position, said means comprising a U-shaped spring arranged in said cap, a lug on said spring projecting through an opening in the side of the cap, and adapted to engage said lever. 70 75 80

4. A fountain pen comprising a barrel, a piston, a slotted cap for the barrel, and means for operating the piston comprising a lever pivoted in the cap and having an aperture, a spring catch arranged in the cap, a head on said spring projecting through an opening in the side of the cap, and adapted to pass through the said aperture to engage and hold the lever in its inoperative position. 85 90

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES PETERSEN.

Witnesses:

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M. A. MILORD.