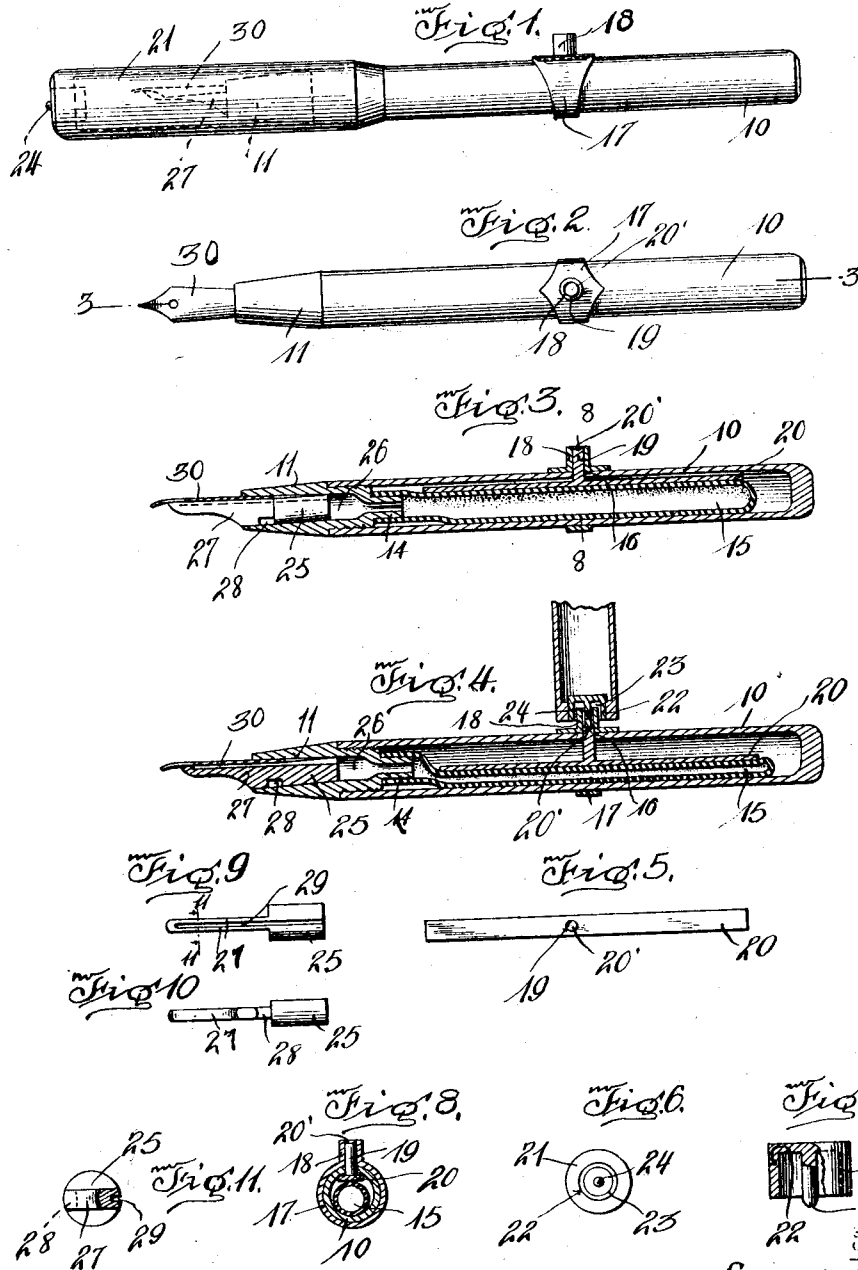


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FOUNTAIN PEN.  
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Patented Aug. 20, 1912.

1,036,149.



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# UNITED STATES PATENT OFFICE.

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## FOUNTAIN-PEN.

1,036,149.

Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed August 4, 1910. Serial No. 575,501.

*To all whom it may concern:*

Be it known that I, GEORGE RENTZ, a citizen of the United States, residing at Wells, in the county of Faribault, State of Minnesota, have invented certain new and useful Improvements in Fountain-Pens; and I 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.

This invention relates to fountain pens and has special reference to a fountain pen of the type commonly called self filling pens.

15 It is a well known fact that in that type of self filling fountain pen wherein the pin projects from the side and in which an elastic reservoir is arranged inside of the staff and adapted to be compressed by a plate carried by said pin, the placing of the pen in the pocket, unless carefully done, acts to compress the reservoir and consequently eject the ink into the pocket of the user.

25 The principal object of the present invention is to provide a construction of pen of this class wherein the compressing pin will be so arranged that it cannot be accidentally pushed in by any pressure against the body or pocket when the pen is thus carried.

30 A second object of the invention is to provide a pen of this class with a coating tool adapted especially for the compression of the reservoir by pushing the said pin inward.

35 With the above and other objects in view the invention consists in general of a pen of the class described provided with a nipple opposite an opening in its staff, said nipple being adapted to contain the pin used for compressing the reservoir and the pin lying entirely within the nipple under normal conditions.

40 The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically set forth in the claim.

45 In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is an outside view of a pen with the cap in place. Fig. 2 is a view at right angles to Fig. 1 with the cap removed. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a similar section showing the rubber tube collapsed. Fig. 5

is a view of a certain presser bar used with this invention. Fig. 6 is a view of the end of the cap. Fig. 7 is a detail of an attachment for said cap. Fig. 8 is a section on the line 8—8 of Fig. 3. Fig. 9 is a view of the top of a nib holder used with this pen. Fig. 10 is a view of the bottom of said nib holder. Fig. 11 is a section on the line 11—11 of Fig. 9.

60 This pen comprises a cylindrical hollow staff 10 which carries at one end a pen holder 11 of the form common in such pens. This holder is provided with the usual pen point 30 of the ordinary construction. The holder is provided with a reduced inner end 14 and on this inner end is held the open end of an elastic reservoir 15, the reservoir preferably being in the form of a rubber tube having one end closed and the other end open, the open end being of such diameter that when engaged on the portion 14 it will be frictionally held and will prevent ink from passing out of the reservoir into the space between said reservoir and the wall of the staff. This staff is provided with an opening 16 opposite the reservoir and preferably located centrally thereof. Surrounding the staff at this opening is a band 17 from which projects an annular flange 18, the flange being concentric with the opening 16 and thus constituting a nipple projecting from said opening. In the nipple and opening 16 is held a plunger 19 to which is connected a compressor bar 20 extending longitudinally of the reservoir and lying between said reservoir and the wall of the staff 10. This compressor bar serves to limit the outward movement of the plunger 19 and also forms reservoir compressing means. The plunger 19 is further provided with a pin receiving recess 20' in its outer end and this plunger is of such length that when the bar 20 lies against the inner wall of the staff 10 the end of the plunger will be sufficiently flush with the end of the nipple 18.

95 The pen is provided with the usual cap 21 and in the end of this cap is formed an opening 22 wherein is held a cup 23, the cup thus providing a recess in the end of the cap. Projecting centrally from the bottom of said cup or recess is a pin 24 which is of such size that its point can enter the recess 20'. The length of the pin is less than the length of the plunger 19.

100 In the operation of the device when it is

desired to fill the pen the cap is removed and the pin 24 positioned with its end in the recess 20'. The cap is then pushed in such a direction as to force the plunger 19 inward. The length of the pin 24 being less than that of the plunger the bottom of the cup or recess will engage with the end of the nipple before said plunger has been forced out of the nipple and opening 16.

The point of the pen is then placed in a suitable quantity of ink held in a stand or other convenient receptacle and the cap removed. The resiliency of the reservoir 15 will cause said reservoir to expand and draw the ink into the reservoir while at the same time the expansion will force the nipple to resume the position shown in Fig. 2. It is to be observed that when the device is placed in the pocket the nipple 18 prevents the plunger 19 from being pushed in by any pressure exerted on the end of the nipple. Furthermore, it is to be noted that the pen cannot be left with the ink reservoir collapsed after filling as it will expand as soon as the pen is removed from the ink bottle. It will also be noted that the pen will not roll over a desk even if its surface be slanting as the projection will prevent this. Still further, by reason of the peculiar arrangement the length of the member 19 need not be as long as any other device of like character since the member 24 acts to push it in the full length. Finally, by this arrangement the reservoir can be completely collapsed so that a large quantity of ink can be drawn thereinto.

I have further provided a novel feed and nib holder for this invention. This nib holder comprises a cylindrical body portion 25 which fits within an opening 26 made in the holder 11. From this cylindrical portion 25 there extends a flat bar 27 having a notch 28 in its lower edge and a groove 29 extends along the top of the portion 25 and the bar 27.

The pen, indicated at 30, is held between the

bar 27 and the wall of the opening or recess 26, the notch 28 serving to give resiliency to the parts while the groove 29 carries the ink to the nib. Furthermore, the flattening of the bar permits the ink to flow back and prevents spilling thereof in the pocket.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

Having thus described the invention, what is claimed as new, is:—

A fountain pen including a cylindrical hollow barrel, a compressible resilient reservoir in said barrel, said barrel having an opening therein intermediate the ends of the reservoir, a flange surrounding said opening and extending outward from said barrel to form a nipple, a plunger movable in said opening and nipple, said plunger being provided on its inner end with oppositely disposed lateral wings extending contiguous with the reservoir throughout substantially the entire length of the latter and disposed between said reservoir and the inner wall of the barrel, said wings forming reservoir compressing means and limiting the outward movement of the plunger; in combination with a cap for said barrel having a cup in one end to receive said nipple and a pin projecting from the bottom of said cup and adapted to pass into said nipple and force the plunger inward, the outer wall of said flange forming a bearing for the cup and the inner wall of the flange a bearing for the pin during their sliding movement relatively to the flange whereby the pin is positively directed into engagement with the nipple in longitudinal alinement with the latter.

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

GEORGE RENTZ.

Witnesses:

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