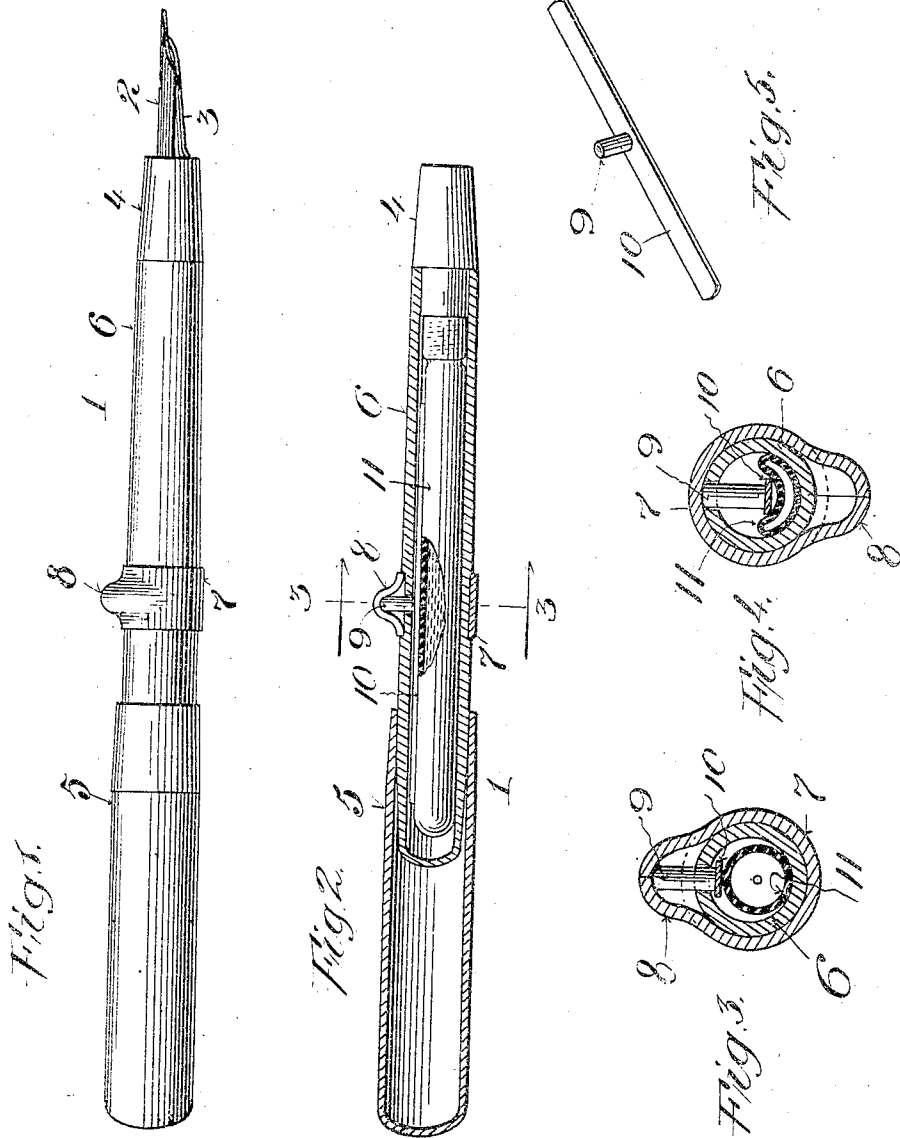


J. L. SCHNELL.
 SELF FILLING FOUNTAIN PEN.
 APPLICATION FILED MAR. 27, 1911.

1,053,879.

Patented Feb. 18, 1913.



Witnesses:
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UNITED STATES PATENT OFFICE.

JULIUS L. SCHNELL, OF ARLINGTON, NEW JERSEY.

SELF-FILLING FOUNTAIN-PEN.

1,053,879.

Specification of Letters Patent.

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Application filed March 27, 1911. Serial No. 617,015.

To all whom it may concern:

Be it known that I, JULIUS L. SCHNELL, a citizen of the United States, and a resident of the city of Arlington, county of Hudson, and State of New Jersey, (whose post-office address is 57 Magnolia avenue, in said city,) have invented a new and useful Improvement in Self-Filling Fountain-Pens, of which the following is a specification.

The object of my invention is to provide a pen of this class which will be simple in construction and durable and effective in operation, and which will not expel the ink inadvertently through carelessness on the part of the user. This object is accomplished by my invention, one embodiment of which is described below.

For a more particular description thereof, reference is to be had to the accompanying drawings, forming a part hereof, in which:

Figure 1 is a side elevation of my improved pen. Fig. 2 is a longitudinal section of the same. Fig. 3 is a sectional view, taken on the line 3—3 of Fig. 2, looking in the direction of the arrows. Fig. 4 is a section similar to Fig. 3, except that the parts are shown in different positions. Fig. 5 is a perspective view of a presser bar. Throughout the various views of the drawings, similar reference characters designate similar parts.

My improved pen 1 is provided with a point 2, a feed bar 3, both of which are secured in the pen section 4, in the conventional manner. The cap 5 is also of the conventional form, so that no description of it is required here.

The improvements which I have made in the pen are found, for the most part, in the barrel 6 which is of the usual form, except that it is provided with an annular recess in which is mounted a ring 7 which is adapted to turn about the barrel 6, but not to otherwise slide thereon, and this ring 7 is provided with a swelling 8, as shown, for a purpose that will appear below. This ring is preferably but not necessarily a split ring as shown with abutting ends. The barrel 6 is also provided with a perforation through which extends a lug 9 on the presser bar 10 which runs longitudinally of the pen, as shown. This presser bar 10 rests on an elastic and compressible

rubber tube 11 which is closed at one end and at its other end is secured to the pen section 4 in any suitable manner.

In view of the foregoing, the operation of my improved pen when filling will be obvious. To refill it is so placed that the lower end of the pen section 4 is immersed in ink. The collar 7 is then turned so as to revolve about the barrel 6 and thereby presses the plug 9 into the interior of the barrel and this forces the bar 10 in the same direction, so that the soft rubber tube 11 is compressed, as shown in Fig. 4. The collar 7 is then turned to its original position, as shown in Fig. 3, and the elasticity of the tube 11 forces the bar 10 into the position shown in Fig. 2, and at the same time sucks the ink into the rubber tube 11. The pressure of the plug 9 against the interior of the collar 7 is sufficient to keep the collar from turning when the pen is filled, unless a positive force is brought to bear on this collar, so that the accidental turning thereof is not possible under ordinary conditions of use, so that under no circumstances will the user of the pen be subjected to the annoyance of having the ink of the pen ejected into his pocket. It is impossible to fill the pen without placing it in such a condition that it cannot accidentally discharge the ink, and this is a new result and a highly desirable feature. If the collar were slid along the barrel in the direction of its length, leaving the projection exposed, the pen might be filled without returning the collar, in which contingency the user would be liable to the accidental discharge of ink into his pocket whenever anything happened to press against this plug. This feature is a common one with self-filling pens, and my invention overcomes the difficulty.

As may be readily observed from the longitudinal section of Fig. 2 and from the transverse section of Fig. 3, the swelling 8 is in the form of a hollow round stud or projection at one side of the ring 7. With particular reference to Fig. 3, it will be seen that the ring or collar 7 snugly embraces the barrel 6 about the entire circumference of the latter. The collar 7 therefore cannot be accidentally moved transversely of the barrel whereby the pin is pressed inward to compress the tube 11 and expel the ink from

the pen. This feature prevents the hand from discharging the ink when the pen is grasped in the wrong place or when it is held too firmly and pressure is exerted against the adjustable parts.

My device is so constructed that the pen barrel 6 must be held in one hand, the ring 7 must be grasped by the other hand, and considerable pressure must be exerted upon the parts to overcome the friction of the pin 9 against the shoulder in the projection 8 to depress the pin. No possible pressure of the hand in writing can so move the ring 7 as to expel the ink. Since the member 8 is in the form of a hollow projection and the ring 7 embraces the entire circumference of the barrel 6, the pin or stud 9 is entirely inclosed, as may be readily seen from a comparison of Figs. 2 and 3, the pin is protected from breaking and is supported in its true position, and no sediment is permitted to accumulate about the pin or in the barrel to impair the free operation of the device. The member 8, being a projection or an abruptly extending portion forms with the body of the ring 7 an abrupt shoulder adapted to release the pin 9 somewhat suddenly when brought into register with the projection 8 and permit the rapid expansion of the tube 11 and the consequent rapid filling of the same—a much desired result in self-filling fountain pens. These shoulders are formed one at each side of the projection and serve as stops indicating the turning of the ring 7 through each complete revolution and limiting the further turning of the ring. This projection 8 is the only projecting portion carried upon the barrel of the pen, and extends, as best seen in Fig. 1, upwardly or outwardly from the plane of the back or top of the pen point 2. The projection 8, therefore, lies between the forefinger and the thumb when the pen is held in position for writing and assists the user in holding the pen in proper position in the hand, and serves as an indicator for quickly determining, by grasping the barrel in the hand, the correct position of the pen for writing. Further, the correct positioning of the stud 9 in its normal extended position may be readily determined by the adjustment of the collar 7 relative to the back of the pen point 2. Should the fountain pen be placed upon a flat surface with a slight inclination where there is a tendency for the barrel to roll, the projection 8 strikes the surface and holds the pen from rolling to any appreciable extent.

While I have shown and described one embodiment of my invention, it is obvious that it is not restricted thereto but is broad

enough to cover all structures that come within the scope of the annexed claims.

It is to be noted that the ring 7 engages the periphery of the pen barrel on all points within its lateral limits, and that the swelling or cam projection 8 extends from its close fitting annular rim from a point within its sides or lateral limits. This serves to retard the rotary movement of the ring so as to prevent inadvertent turning of the latter which inadvertent turning would cause the ejection of the ink from the flexible tube. The swelling or projection 8 forms an abrupt stop and thus the inadvertent turning is measurably prevented and the position of the stop in relation to the barrel of the pen readily determined so as to enable the user of the pen to know when the pen is in safe condition.

Having thus described my invention, what I claim is;

1. In a self-filling fountain pen a barrel having an opening through one side thereof, a collapsible tube in the barrel, a tube compressing pin in the barrel and extending outwardly through said opening, and a closely fitting ring rotatably mounted on the barrel over the opening and bearing at its inner wall against the pin, said ring having a radial projection at one side and between the edges of the ring with an eccentric inner wall whereby to admit of the extension of the pin to its outermost position, the sides of said projection merging into the edges of the ring whereby to completely inclose the pin and prevent dirt entering said opening in the barrel.

2. In a self-filling fountain pen, a barrel having an exterior annular groove and an opening through one side intersecting the groove, a collapsible tube in the barrel, tube compressing means in the barrel including a pin projecting outwardly through said opening and a rotatable ring seated in the groove closely fitting the barrel and bearing against the outer end of said pin, said ring having a hollow projection at one side the inner wall of which is eccentric to the inner wall of the ring and adapted to receive the pin when the latter is in its outermost position, the sides of said projection bearing against the barrel whereby to completely inclose the pin when extended to prevent dirt entering said opening.

Signed at the city of New York, county of New York and State of New York, this 22nd day of March, 1911.

JULIUS L. SCHNELL.

Witnesses:

H. RADZINSKY,
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