

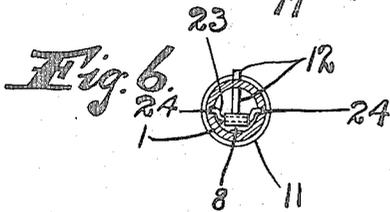
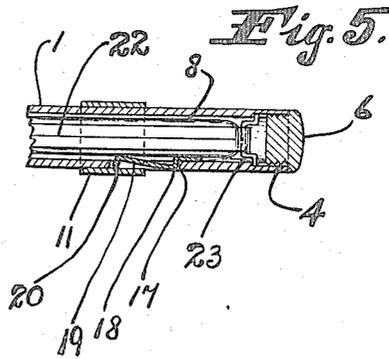
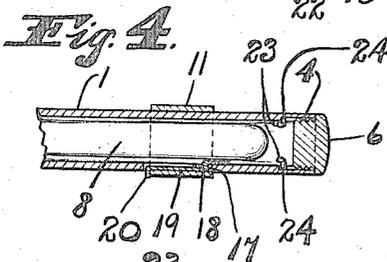
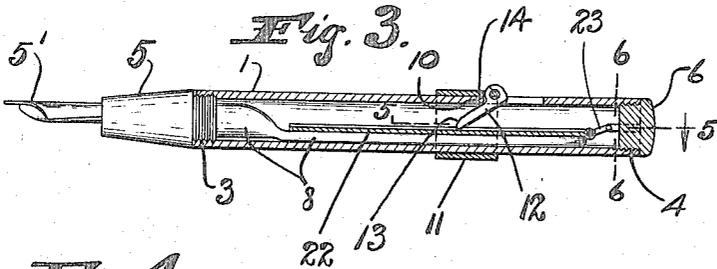
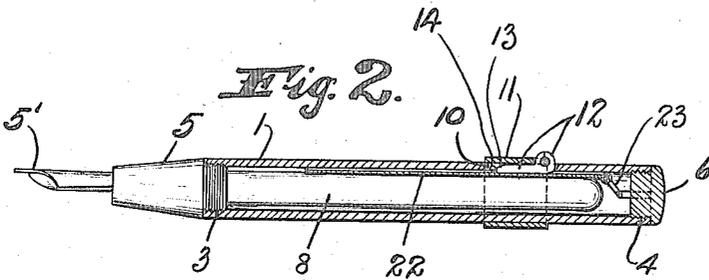
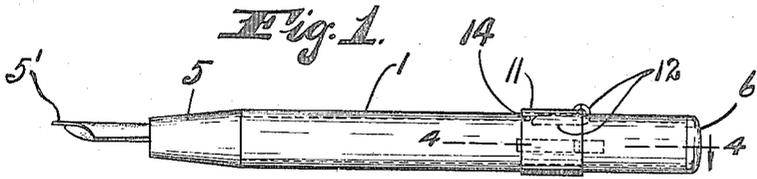
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FOUNTAIN PEN.

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Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## FOUNTAIN-PEN.

1,133,349.

Specification of Letters Patent. Patented Mar. 30, 1915.

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*To all whom it may concern:*

Be it known that we, RUEL W. WHITNEY and CHARLES NELSON RICHARDS, citizens of the United States of America, residing at Cleveland, county of Cuyahoga, State of Ohio, have invented a certain new and useful Improvement in Fountain-Pens; and we 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 pertains to make and use the same.

This invention relates to new and useful improvements in fountain pens, and particularly to the type of fountain pens known as self-filling pens having the ink reservoir formed of an elastic tube closed at its upper end and having its lower end open and secured to the pen holding section of the outer casing or barrel of the pen.

The object of our invention is to provide new and improved means for compressing the elastic tube or reservoir so as to create a vacuum therein in order that when the compression is relieved a suction will be created which will cause the ink to flow into the tube if the pen is immersed in an ink well.

Our invention, therefore, consists in providing new and improved means for compressing the elastic tube which can be readily applied to the pen, which will be positive in action and which, when not in use, will be held in such a position that it will not create any pressure on the said tube.

A further object of our invention is to provide a new and improved locking means which will prevent the operation of the tube compressing means when the pen is in use for writing or being carried in the pocket.

With these objects in view and with the intention of securing other advantages which will hereinafter appear, our invention consists in the features of construction and combination of parts hereinafter described in the specification, pointed out in the claims and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a view in elevation of a pen embodying our invention. Fig. 2 is a view mostly in central longitudinal section showing the tube inflated and the compressing means in its inoperative or normal position. Fig. 3 is a similar view showing the tube deflated and the compressing means in its operative position.

Fig. 4 is a section on line 4—4, Fig. 1. Fig. 5 is a section on line 5—5, Fig. 3. Fig. 6 is a section on line 6—6, Fig. 3.

Again referring to the drawings, 1 represents the body portion of the outer casing or barrel of the pen. This body portion is tubular in form and may be made of any suitable material. At each end said body portion is provided with an interior screw thread, shown at 3 and 4. The pen holding section, shown at 5, is arranged to screw into the body portion and is adapted to receive a pen 5' in the usual manner. A cap or plug 6 is arranged to screw into the opposite end of the body portion which we may term the upper end of the barrel. Within the barrel is arranged an elastic tube 8, preferably made of rubber, which is closed at its upper end, and its lower end is secured to the pen holding section 5 so that the open end of said tube communicates with the passageway in the said pen holding section.

In the side of the barrel and preferably near the upper end thereof is formed a slot 10. A ring or band 11 is arranged on the outside of the barrel so as to slide freely thereon. To the said band is pivotally secured a small pawl 12 which is approximately the same length as the slot 10 and is adapted to lie in the said slot 10 and underneath the said band 11 when in its inoperative position. The forward end of the said pawl 12 is preferably beveled, as shown at 13, and a pin 14 is mounted in the said casing at the end of the said slot 10 adjacent to the said beveled end when the said pawl is in its operative position. When the said band 11 is moved down on the casing, that is, in the direction of the pen holding section, the said pawl 12 engages with the said pin 14, which causes the said pawl to swing down and assume the position shown in Fig. 3. In order that the compressing effect of the pawl 12 may be transmitted the full length of the tube 8 a thin rigid metallic plate 22, which is approximately as long as the said tube, is inserted between the tube and the said pawl 12. To hold the said plate 22 in position, and at the same time permit the plate to have the required freedom of movement, one end of said plate 22 is secured to a bail 23. The said bail is provided with small trunnions 24 which are journaled in the sides of the barrel.

In order to prevent the accidental shifting of the band 11, which would cause the

pawl to operate and compress the tube when filled with ink and thereby cause the ink to be ejected from the tube, a locking device is provided, which is arranged as follows:—

5 In the side of the barrel is formed a slot 17. In the slot 17 is arranged a latch 18 which at one end is provided with a resilient stem or shank portion 19 which is adapted to be secured to the inner wall of the barrel. At

10 its opposite end the latch 18 carries an outwardly projecting lip 20. When the said band 11 is in its normal position with the lever in its inoperative position, as shown in Figs. 1 and 4, the lip 20 of the said latch

15 will engage the edge of the said band and before the said band can be moved it is necessary to press down the said lip into the said slot 17 and thereby free the said band.

When it is desired to fill the reservoir the

20 latch 19 is pressed back so as to free the band 11 and the band is then moved down on the barrel in the direction of the pen holding section. As the band moves along the barrel the end of the pawl 12 comes in

25 contact with the pin 14, which causes said pawl to swing down and as the pawl swings down it engages with the plate 22 causing said plate to move toward the opposite side of the barrel and thereby compressing the

30 tube 8 and forcing the air therefrom. After the tube has been compressed the pen holding end of the barrel is immersed in the ink well and the band 11 is then moved back

35 lever 12 to swing up and the tube will assume its original position through the expansive force of the rubber composing the same and the ink will be drawn or forced into the tube.

40 What we claim is,—

1. In a self-filling fountain pen, the combination with a barrel having a slot in the side thereof and an ink reservoir in said barrel formed in resilient material of a band

45 movable on said barrel and a pawl pivotally secured to said band to lie in said slot in said barrel when said band is in its normal position, the arrangement being such that when the said band is shifted on said

50 barrel said pawl will swing down into the interior of said barrel.

2. In a self-filling fountain pen, the combination with a barrel having a slot in the side thereof and an ink reservoir in said barrel formed of resilient material of a band

55 movable on said barrel, a pawl pivotally secured to said band to lie in said slot in said barrel when said band is in its normal position, the arrangement being such that when

60 the said band is shifted on said barrel said pawl will swing down into the interior of said barrel and a latch mounted on said

barrel and adapted to engage with said band when said band is in its normal position and lock said band against movement.

3. In a self-filling fountain pen, the combination with a barrel having a longitudinally extending slot in the side thereof, a compressible ink reservoir in said barrel and a plate arranged on said ink reservoir below the slot in the said barrel of a band

70 arranged on said barrel to slide longitudinally thereon and a pawl pivotally secured to said band to lie in the slot in said barrel when said band is in its normal position, the free

75 end of said pawl engaging with one end of said slot to be swung down into engagement with said plate when said band is shifted longitudinally on the said barrel.

4. In a self-filling fountain pen, the combination with a barrel having a longitudinally extending slot in the side thereof, a pin arranged to form one end of said slot, a compressible ink reservoir in said barrel and a plate arranged on said ink reservoir

85 below the slot in the said barrel of a band arranged on said barrel to slide longitudinally thereon and a pawl pivotally secured to said band to lie in the said barrel when said band is in its normal position, the free

90 end of said pawl engaging with said pin in said slot to be swung down into engagement with said plate when said band is shifted longitudinally on the said barrel.

5. In a self-filling fountain pen, the combination with a barrel having two slots in the side thereof, a compressible ink reservoir arranged in said barrel and a plate arranged between the ink reservoir and the wall of the barrel of a band slidably

100 arranged on the outside of said barrel, a pawl pivotally secured to said band and in the normal position of said band lying in one of said slots in said barrel and a latch arranged in the other slot in said barrel, said latch

105 having a lip which extends up and engages with said band when said band is in its normal position and locks said band against movement, the arrangement being such that when the said latch is detached from the

110 band and the band shifted longitudinally on said barrel said pawl will swing down into engagement with said plate and compress said ink reservoir between said plate and the opposite wall of said barrel.

In testimony whereof, we sign the foregoing specification, in the presence of two witnesses.

RUEL W. WHITNEY.  
CHARLES NELSON RICHARDS.

Witnesses:

VICTOR C. LYNCH,  
B. C. BROWN.