

No. 678,547.

Patented July 16, 1901.

S. S. CROCKER.
FOUNTAIN PEN.

(Application filed May 31, 1901.)

(No Model.)

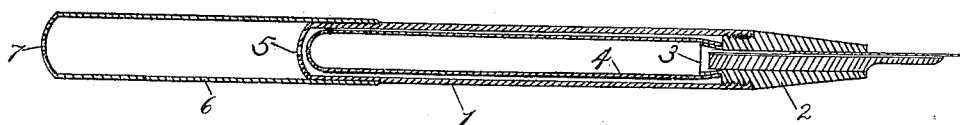


Fig. 1.

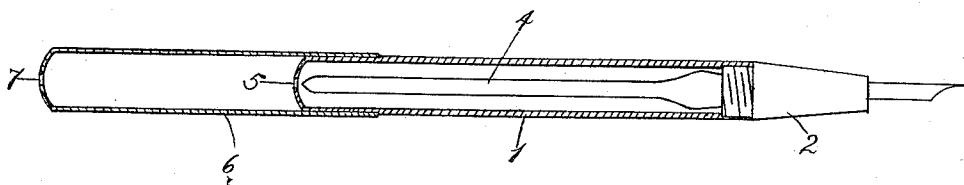


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 678,547, dated July 16, 1901.

Application filed May 31, 1901. Serial No. 62,494. (No model.)

To all whom it may concern:

Be it known that I, SETH S. CROCKER, a citizen of the United States, and a resident of Bridgewater, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention relates to an improved form of fountain-pen which may be quickly and conveniently filled without taking the pen apart at all and in filling which the ordinary medicine-dropper is dispensed with.

Prior to my invention various forms of fountain-pens have been produced which may be filled without removing the pen-section; but they have all been provided with some mechanical device for filling the pen which was liable to be accidentally moved, causing the ink to be discharged from the pen at inopportune times. When means have been employed to shield these parts so as to avoid accidents of this nature, the means has, so far as I am aware, always been an inconvenient projection which was so much in the way of the user and so objectionable for many reasons as to preclude its use.

The object of my invention is to produce a form of fountain-pen which may not only be filled almost instantly without removing any parts, but which is open to none of the objections above noted and which is so simple that the cost of manufacture of the pen is not increased. I accomplish this object by providing an elongated rubber sack which closely fits the barrel of the holder and is secured at one end to the pen-section, so that the sack is contained in an air-tight chamber, and then providing an aperture in the end of the barrel and cap, so that when the latter is placed on the end of the barrel in its usual place when the pen is being used and a person blows into the end of the cap a pressure will be created about the sack sufficient to collapse the same, so that when the pressure is removed the sack may immediately expand and suck in the ink through the feed-passage.

Referring to the drawings, Figure 1 is a central longitudinal cross-section of my device.

Fig. 2 is a similar view showing the sack collapsed by the act of forcing air into the barrel.

The barrel 1 is provided with the usual pen-section 2, which is in turn provided with the usual feed and pen and is connected to said barrel by a screw-thread or some other tight joint. Said holder is provided with a tubular projection 3, on which the end of a rubber sack 4 is stretched, forming a tight connection therewith. The opposite end of the barrel from the pen is provided with a central aperture 5, and the usual cap 6 is slipped on the end of said barrel, said cap being provided with a central aperture 7 of substantially the same size as aperture 5.

When a person desires to fill the sack with ink, he places the end of cap 6 in his mouth and blows through the aperture 7, so that the air will pass through the cap and aperture 5 into the air-tight chamber in which the sack 4 is contained. The air-pressure in said chamber immediately compresses the sack, as shown in Fig. 2, so that the air therein is expelled therefrom through the passage of the feed. While the air-pressure is maintained in the chamber containing the sack the pen is dipped into the ink up to the end of the pen-section, and then the person removes his mouth from the end of the cap, permitting the compressed air in the chamber to escape, so that the sack may again expand and suck in the ink through the feed-passage. It will be obvious that the operation of filling the pen in this manner is almost instantaneous and practically takes but a trifle more time than to dip the pen into the ink. As the cap will always be placed on the end of the barrel, as shown in the drawings, except when it is being carried in the pocket, it is never necessary to remove or replace any parts in filling the pen. Moreover, there are no parts which can be moved so that the sack will be accidentally compressed, causing the ink to be discharged. If, however, the ink becomes clogged in the feed or the pen does not start when it touches the paper, the user may blow gently into the end of the cap, slightly compressing the sack and sending the ink to the point of the pen. The necessity for shaking the pen to start the ink is thus avoided.

though my arrangement is very simple, it is exceedingly effective for the purpose and enables me to produce a pen which may be filled much more quickly and easily than any fountain-pen which has previously been produced.

5 Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

1. A fountain-pen consisting of a pen-section 10 having a feed and pen therein, a barrel having an air-tight connection with said section, a compressible rubber sack which is arranged in said barrel and has an air-tight connection with the inner end of said pen-section, said barrel, section, and sack forming 15 an air-tight chamber which surrounds said sack, and said barrel being provided with an aperture in its end opposite the pen-section; whereby air may be forced through said aperture 20 into said air-tight chamber and thus compress the sack, so that when the air-pressure is allowed to escape the sack may expand and suck in the ink.

2. A fountain-pen consisting of a pen-section having a feed and pen therein, a barrel 25 having an air-tight connection with said section, a compressible rubber sack which is arranged in said barrel and has an air-tight connection with the inner end of said pen-section, said barrel, section, and sack forming 30 an air-tight chamber which surrounds said sack, and said barrel being provided with an aperture in its end opposite the pen-section; and a cap on the end of the barrel which incloses said aperture, said cap being also provided 35 with an aperture at its closed end, whereby air may be forced into said closed chamber and thus compress the sack, so that when the air-pressure is allowed to escape the sack may expand and suck in the ink. 40

In testimony whereof I have affixed my signature in presence of two witnesses.

SETH S. CROCKER.

Witnesses:

LOUIS H. HARRIMAN,
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