(No Model.)

C. J. RENZ.

FOUNTAIN PEN.

No. 557,149. Patented Mar. 31, 1896.

Fig: 1.

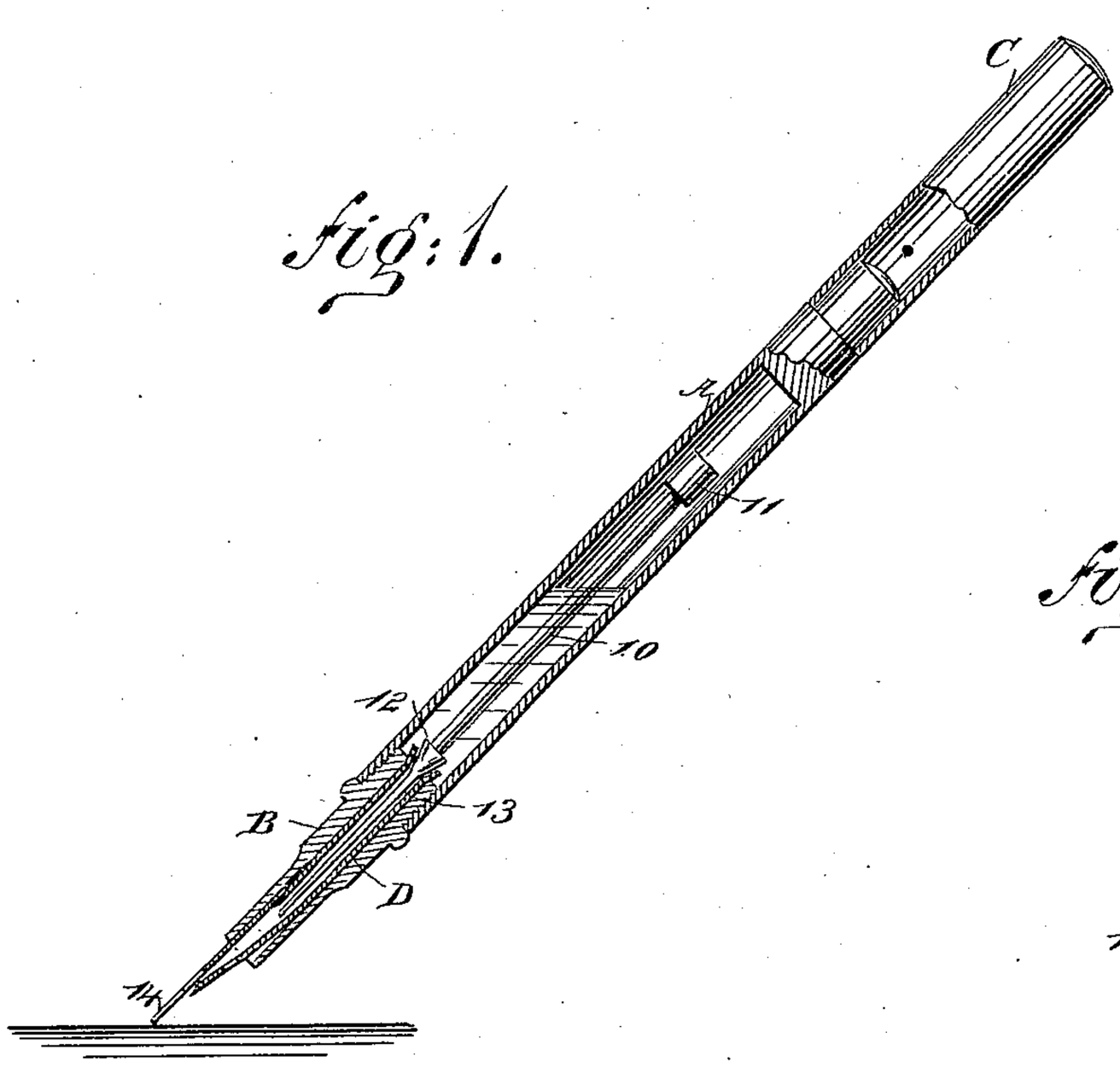
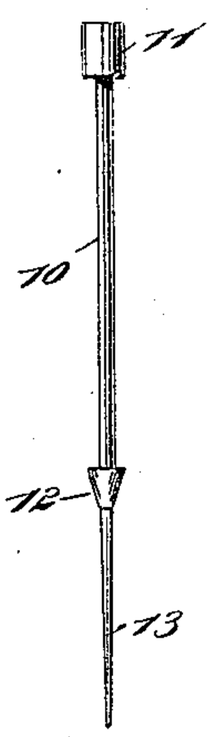


Fig: 3.



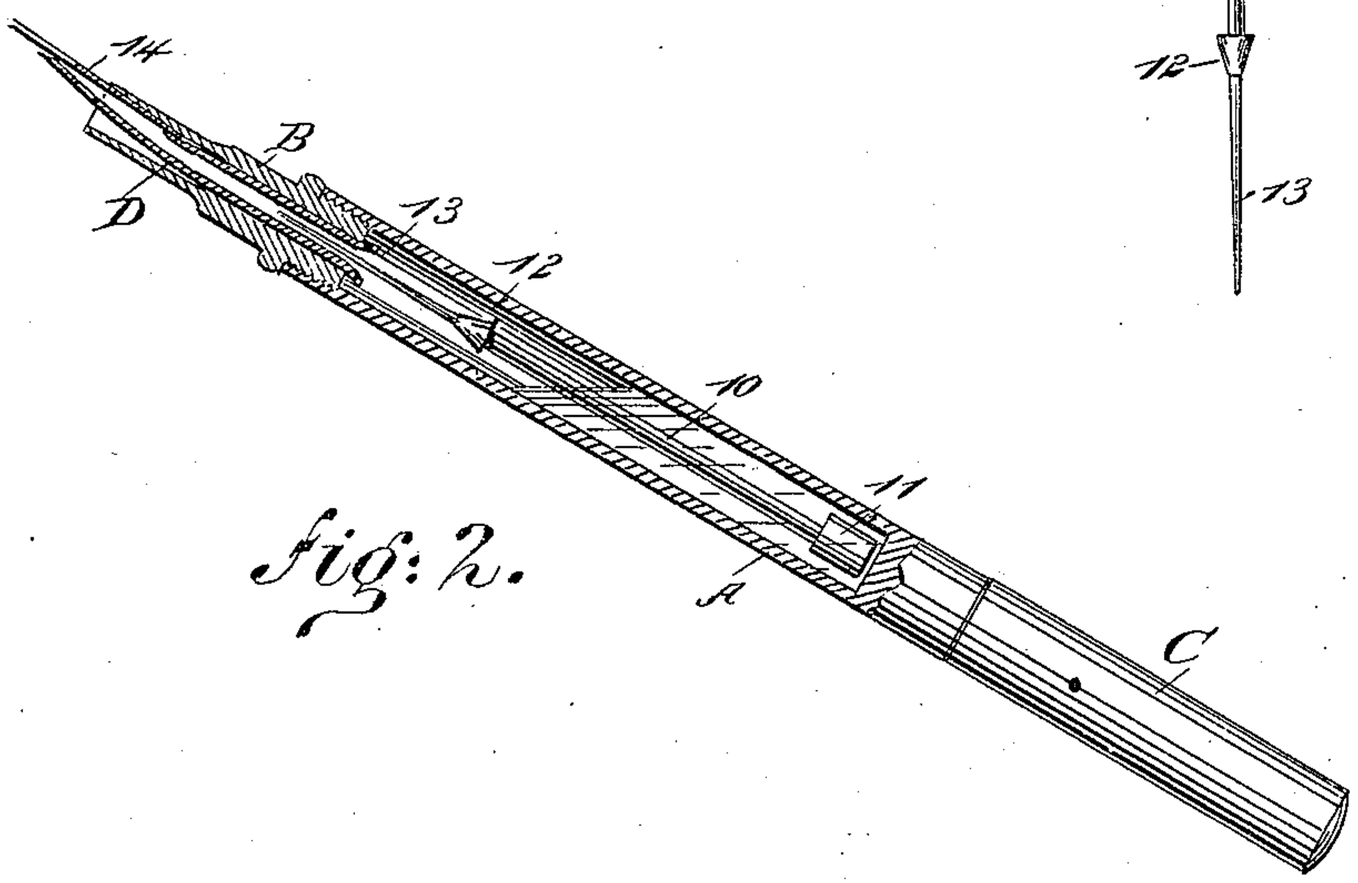


Fig: 2.

WITNESSES:

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CARL J. RENZ, OF NEW YORK, N. Y.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 557,149, dated March 31, 1896.

Application filed May 28, 1895. Serial No. 550,969. (No model.)

To all whom it may concern:

Be it known that I, CARL J. RENZ, of New York city, in the county and State of New York, have invented a new and Improved Fountain-Pen, of which the following is a full, clear, and exact description.

My invention relates to an improvement in fountain-pens; and the object of this invention is to provide a pen of this description in which only a predetermined quantity of ink will be contained in the duct supplying the pen, the supply of ink thereto being cut off when the duct is once filled by a piston interiorly placed within the barrel, and whereby, upon simply throwing the pen in a rearwardly direction or in direction of the end opposite that carrying the pen proper, the piston will be carried to a position which will admit of the duct being again supplied with ink, the piston closing the duct when the pen is brought to writing position, and whereby, furthermore, when the pen is not required for use, upon the rearward motion of the said pen the piston will act to pump out more or less ink from the duct, thus precluding the possibility of the pen leaking in the pocket in the ordinary manner, and in writing preventing a surplus of ink being supplied to the writing-point or pen proper, and consequently preventing blotting under ordinary usage.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional view of the fountain-pen in writing position. Fig. 2 is a similar view of the fountain-pen in position to cause the plunger to uncover the duct, and Fig. 3 is a side elevation of the plunger removed from the barrel of the pen.

In carrying out the invention, the barrel A of the pen may be of the ordinary construction, likewise the plug-tip B secured in the lower end of the barrel, and the said barrel is fitted to receive the ordinary cap C, which, when the pen is not in use, is placed over the plug-tip.

The duct D is located within the plug-tip, as usual, and extends beyond the inner end thereof, being provided with one or more openings for the admission of air and for the feed of the ink to the writing pen or point 14; but the said duct at its inner end is without an opening except that at the top, its sides being closed. The pen 14 is placed in the plug-tip, as usual.

Within the barrel A of the said fountain-pen a plunger is located, consisting of a stem 10, provided with a head 11 at its upper or inner end, the said head serving as a weight, and a conical collar or second head 12 at one side of the center of the length of the said plunger, adapted to close the top of the duct D, while the lower portion or outer extremity 13 of the stem of the plunger is made tapering and of less diameter than that of the duct D which it is adapted to enter, and which it does not leave in any position of the barrel.

In the operation of the pen, when the barrel is in writing position, the lower conical head or collar 12 of the plunger will close the upper end of the duct D, which had previously been filled, by reversing the barrel, and while the pen is in writing position the lower cone-head of the plunger will effectually prevent any more fluid entering the duct, thus preventing in a great measure the possibility of surplus ink being supplied to the pen or dropping from the duct under pressure from that within the barrel, since the ink within the duct will not be liable to any such pressure. After the ink contained in the duct has been used up, it may be again supplied with ink by simply throwing the pen in a rearward direction, inclining it to the position shown in Fig. 2—that is, bringing the writing-point or pen proper, 14, in an upwardly-inclined position—whereupon the lower or sealing head of the plunger will leave the duct and it will be supplied with ink when the barrel is restored to writing position, the plunger then serving substantially as a pump, being propelled downwardly by the weighted or upper head 11, and it is also evident that when the pen is no longer required for writing, by carrying the pen to the position shown in Fig. 2 the plunger will serve to assist the ink contained in the duct flowing out there-

from into the barrel, and by carrying it to the position shown in Fig. 1 quickly the plunger will be restored to its sealing position, admitting comparatively little ink into the duct. As heretofore stated, the lower pointed end of the plunger does not at any time leave the duct, and serves as a guide to the body of the plunger.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a fountain-pen, the combination with a barrel, and a duct leading from the barrel, of a plunger loose in the barrel and having guided movement in the duct, the plunger being provided with a head for closing the said duct, substantially as described.

2. In a fountain-pen, the combination with a barrel, and a duct leading therefrom, of a plunger loose in the barrel, comprising a stem provided with a head at one end and with a second head at one side of the center of its length for closing the duct, the end of the stem projecting beyond the second head projecting into the duct, substantially as described.

3. In a fountain-pen, the combination with a barrel and a duct leading from the barrel, of a plunger loose in the barrel, consisting of a stem provided with a head at one end and with a conical head at one side of the center of its length, the portion of the stem beyond the conical head being reduced and working in the duct, substantially as described.

4. A fountain-pen, comprising a barrel, a duct having open inner end and closed sides at said end, and a plunger loose in the barrel, consisting of a stem provided with a head at one end and with a conical head at one side of the center of its length, the portion of the stem beyond the conical head being reduced and tapering, substantially as herein shown and described.

CARL J. RENZ.

Witnesses:
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