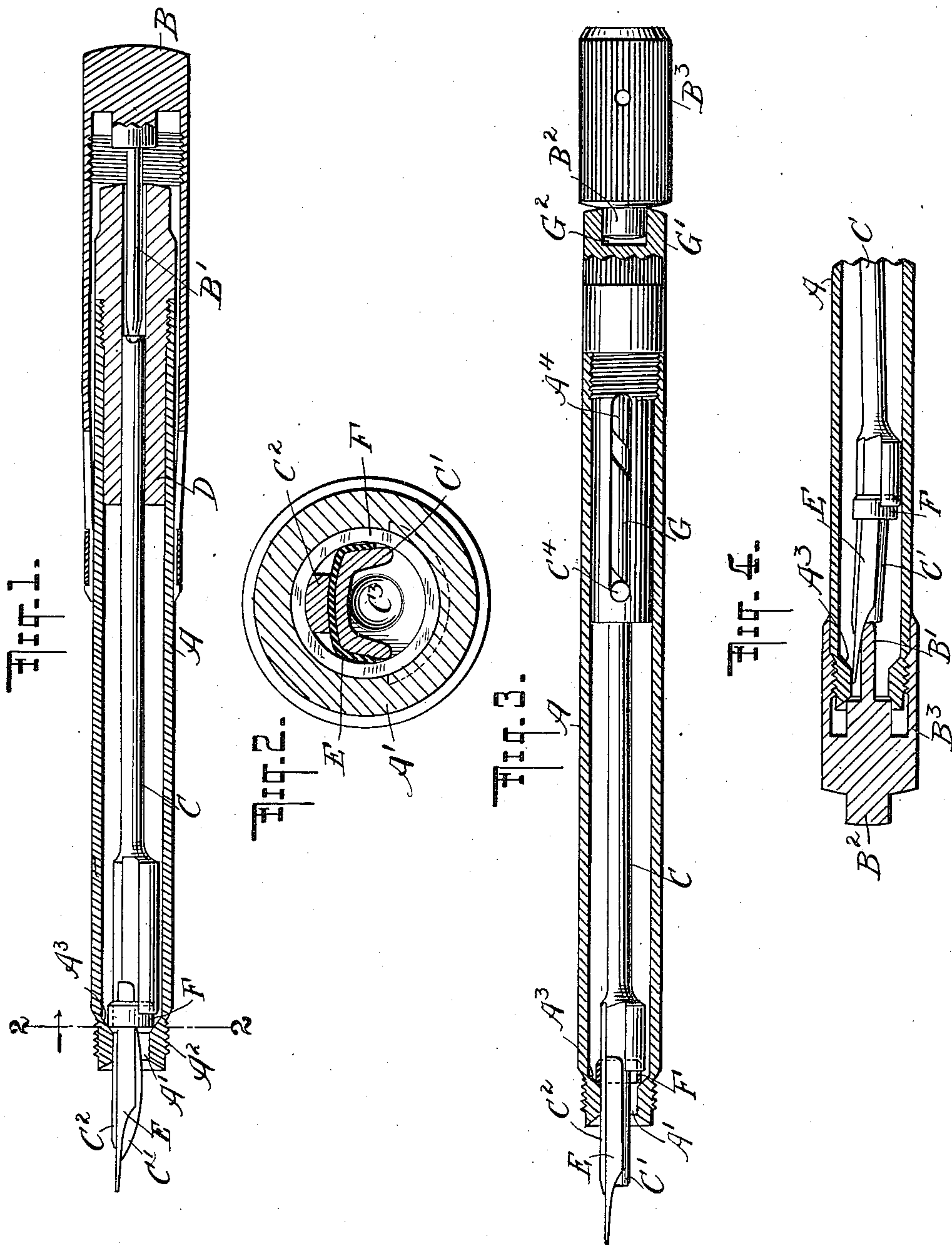


953,316.

Patented Mar. 29, 1910.



WITNESSES

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FOUNTAIN-PEN.

953,316.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed April 14, 1909. Serial No. 439,897.

To all whom it may concern:

Be it known that I, FRANCIS C. BROWN, a citizen of the United States, and resident of New Brighton, Staten Island, borough and county of Richmond, city and State of New York, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

My invention relates to fountain pens and particularly to that type in which a nib-carrying feed-bar is adapted to be projected from the barrel or retracted into the same.

The object of my present invention is to prevent the spattering of ink at the moment when the pen is in use or when withdrawing it therefrom, and to properly position and steady the nib in the writing position.

Reference is to be had to the accompanying drawing in which—

Figure 1 is a longitudinal section of a fountain pen showing the nib in position for use; Fig. 2 is a cross section on line 2—2 of Fig. 1; Fig. 3 illustrates another form of pen with my present invention applied thereto; and Fig. 4 is a partial view of the same pen in the closed position.

In Figs. 1 and 2 the barrel A is provided with a nozzle A' having a screw-thread A² to receive the cap B and an internal incline or shoulder A³, the purpose of which will be fully explained hereinafter. The feed-bar C is suitably guided in a packing D located at the rear end of the barrel and the front end of this feed-bar carries the tongues C', C² between which the nib E is adapted to be received. In this form of the pen the nib is projected and retracted by the action of a pin B' located within the cap B and adapted to engage either the rear end of the feed bar C when the cap is placed on the rear end of the barrel, or a recess or abutment C³ provided at the forward end of the feed bar.

The features described so far have been disclosed in prior patents of mine. According to my present invention I place at the rear end of the tongues C', C², that is adjacent to the abutment C³, a ring or collar F, the diameter of which is greater than the internal diameter of the nozzle A', but of course smaller than the internal diameter of the ink reservoir. This ring is therefore adapted to engage the shoulder A³ when the pen is in the writing position. The ring might be placed loosely around the feed tongues C', C², but I prefer to hold it in

place securely by fitting it into a curved slit at the forward end of the feed bar and the rear edge of the ring may be beveled to facilitate its insertion. In any event, however, the ring F surrounds both feed tongues and is located eccentrically with reference to the axis of the feed bar, or rather to the pen seat. The reason for this eccentric arrangement is as follows: As will be seen from Fig. 1, the lower tongue C' is bent sharply and has a tendency to throw the feed bar to one side as the nib carrying portion passes through the nozzle A'. The eccentric location of the ring F counteracts this tendency and insures a proper position of the pen when projected. It will be seen that the ring F engages the inclined shoulder A³ along its entire periphery and the ring therefore forms a perfect seal or valve closing communication between the ink reservoir and the outside except for the slight feed channel which is left on the upper face of the nib at each side of the upper tongue C². As the ring becomes seated and unseated uniformly on and from the entire circumferences of the inclined shoulder A³ I avoid the spattering of ink which has been found an objectionable feature of some earlier constructions. The diameter of the ring is practically the same as that of the forward portion of the feed bar.

While in Figs. 1 and 2 the pen is advanced and retracted by the pushing action of the cap, in Fig. 3 I have shown my invention applied to a pen in which the advance and withdrawal of the nib are effected by turning a spirally grooved sleeve G which is located at the rear end of the barrel and receives the feed bar C together with a pin C' projected from the feed bar through the spiral slot of the sleeve into a longitudinal slot A⁴ of the barrel. In the particular construction shown the sleeve is adapted to be turned by means of a button G' secured thereto and provided with an axial recess G² to receive a pin B² projected from the closed end of the cap B³ at the outside thereof. The purpose of this pin or lug B² is to temporarily connect the cap with the button so as to prevent loss of the cap, but it is not intended that the cap should be used as a means for turning the button G'. The ring F would be the same in this construction as in the one described above. This ring does not exert any binding action on the nib E since the inner surface of the ring is spaced

from the upper surface of the nib and said inner surface engages the tongue C² in the construction shown. It is not necessary, however, that there should be such an engagement and the ring might surround the tongues C', C² loosely. The avoidance of a binding action on the nib is an advantage of considerable importance in as much as it allows the nib to be removed readily when desired, with the pen in the writing position.

I claim as my invention:

1. In a fountain pen, the combination of the barrel having a reduced nozzle and an inclined internal shoulder at the inner end of the nozzle, a nib-carrying feed bar movable lengthwise in the barrel and provided at its forward end with tongues adapted to receive the nib between them, and with a collar arranged to engage the said inclined shoulder along its entire circumference, and means for advancing and retracting the feed bar.

2. In a fountain pen, the combination of the barrel having a reduced nozzle and an inclined internal shoulder at the inner end of the nozzle, a nib-carrying feed bar movable lengthwise in the barrel and provided at its forward end with tongues adapted to receive the nib between them and a collar surrounding said tongues and adapted to engage said inclined shoulder along its entire circumference, and means for advancing and retracting the feed bar.

3. In a fountain pen, the combination of the barrel having a reduced nozzle and an inclined internal shoulder at the inner end of the nozzle, a nib-carrying feed bar movable lengthwise in the barrel and provided at its forward end with a tongue adapted to engage the nib from above and with a collar arranged to engage said inclined shoulder along its entire circumference and surrounding said tongue, and means for advancing and retracting the feed bar.

4. In a fountain pen, the combination of the barrel having a reduced nozzle and an inclined internal shoulder at the inner end of the nozzle a nib-carrying feed-bar movable lengthwise in the barrel and provided at its forward end with a tongue adapted to engage the upper surface of the nib, and with a collar arranged eccentrically to the pen seat and surrounding said tongue, said collar being adapted to engage the said inclined shoulder along its entire circumference, and means for advancing and retracting the feed bar.

5. In a fountain pen, a barrel, a nib-carrying feed-bar movable therein lengthwise, a rotary button located at the rear end of the barrel and provided with an axial recess, the said button being exposed so that it may be operated by hand, a cap provided with an internal pin and an external stud, the said

pin acting as a stop to prevent contact with the nib when the cap is placed on the front end of the barrel and the said stud fitting in the axial recess of the button when placed on the rear end of the barrel.

6. In a fountain pen the combination of a barrel having a reduced nozzle and an inclined internal shoulder at the inner end of the nozzle, a nib-carrying feed bar movable lengthwise in the barrel and provided near its forward end with an enlarged body and a tongue extending forward of said body, the tongue being adapted to engage the back surface of the nib, a collar surrounding the tongue and arranged eccentrically to the said body, the said collar being adapted to engage the inclined shoulder at opposite points, and means for advancing and retracting the feed bar.

7. In a fountain pen the combination of a barrel having a reduced opening and an interior shoulder at its forward end, a nib-carrying feed bar movable lengthwise in the barrel, the said feed bar being provided with an enlarged body near its forward end and an attenuated portion extending forward of the said body, the attenuated portion being adapted to engage the nib, a collar surrounding the attenuated portion and arranged eccentrically to the said body, the said collar being adapted to engage the shoulder at opposite points, and means for advancing and retracting the feed bar.

8. In a fountain pen the combination of a barrel having a reduced opening and an interior shoulder at its forward end, a nib-carrying feed bar movable lengthwise in the barrel, the said feed bar being provided with an enlarged body near its forward end and an attenuated portion extending forward of the said body, the attenuated portion being bent toward the nib, a collar surrounding the attenuated portion and arranged eccentrically to the said body, the said collar being adapted to engage the shoulder at opposite points, and means for advancing and retracting the feed bar.

9. In a fountain pen of the class described, the combination of a feed bar movable lengthwise of the barrel and provided with tongues adapted to support the forward portion of the nib, and an enlarged body adapted to support the rear portion thereof, with a collar adjacent to the pen seat and arranged eccentrically thereto, said collar being adapted to move with said feed bar.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANCIS C. BROWN.

Witnesses:

JOHN LOTKA,

JOHN A. KEHLENBECK,