

March 2, 1926.

1,574,930

R. T. POLLOCK

FOUNTAIN PEN

Filed April 18, 1924

2 Sheets-Sheet 1

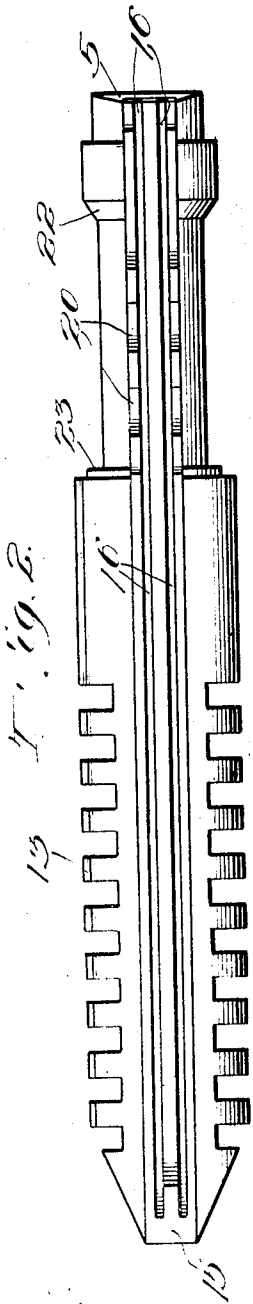


Fig. 2.

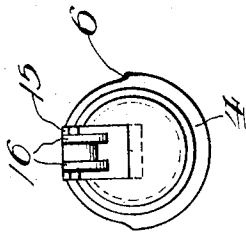


Fig. 3.

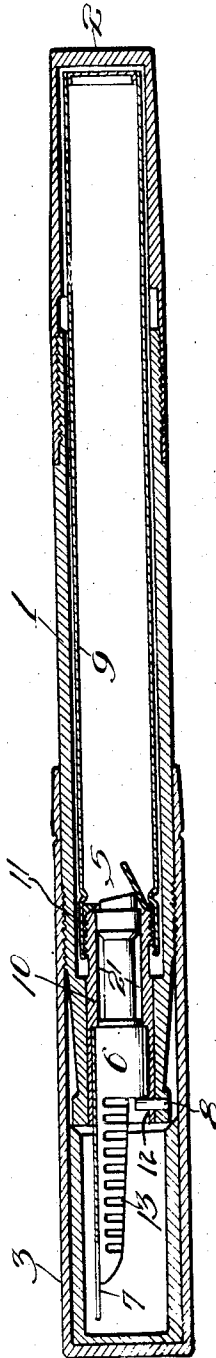


Fig. 1.

Witness:  
*Stephen M. ...*

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By *Frank A. Belknap*  
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March 2, 1926.

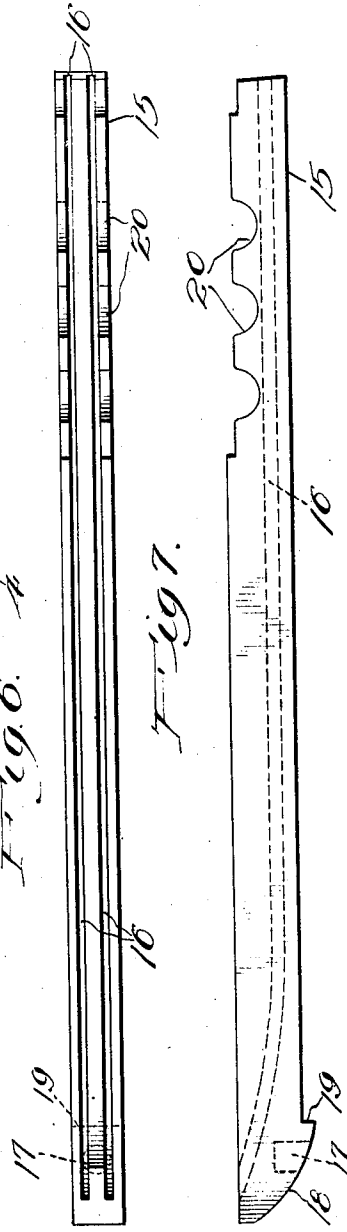
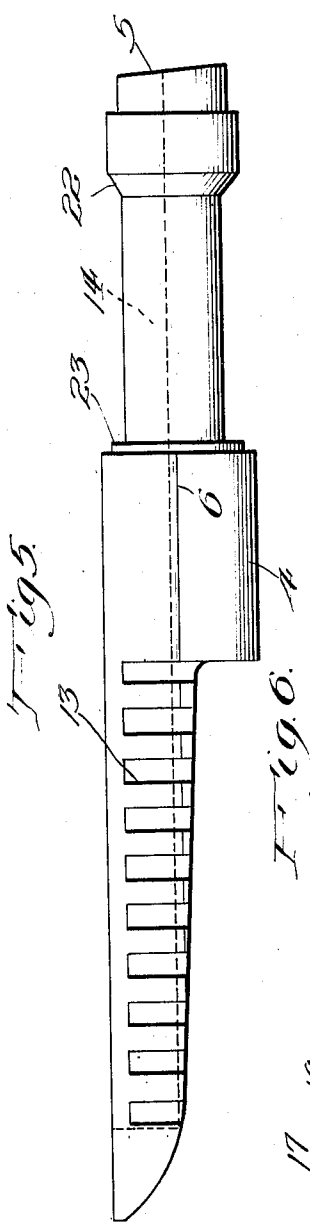
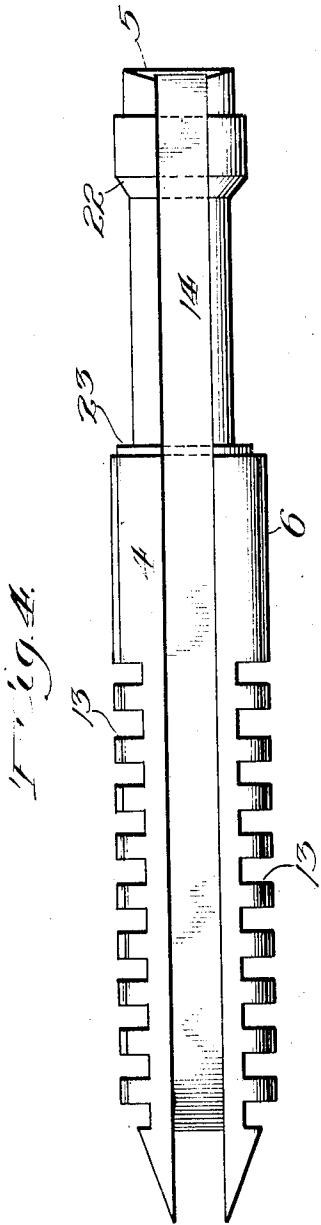
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FOUNTAIN PEN

Filed April 18, 1924

2 Sheets-Sheet 2



Witness:

*Stephen A. Rebra*

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Patented Mar. 2, 1926.

1,574,930

# UNITED STATES PATENT OFFICE.

ROBERT T. POLLOCK, OF BOSTON, MASSACHUSETTS.

## FOUNTAIN PEN.

Application filed April 18, 1924. Serial No. 707,444.

*To all whom it may concern:*

Be it known that I, ROBERT T. POLLOCK, a citizen of the United States, residing in the city of Boston, county of Suffolk, 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 improvements in fountain pens, and refers more particularly to an interchangeable ink feed which can be instantly mounted in or removed from a channelled support without otherwise disturbing the set of the pen.

Among some of the objects of this invention are to provide a fountain pen in which the ink feed may be made in two parts, the ink feed channel being movable independently of the ink feed; to provide a pen in which the ink channel can be positioned or removed without disturbing the set of the nib or the feed; to provide a construction which permits of the withdrawal of the used feel channel from the ink feed and a new one positioned in place; to provide a construction in which the channelled feed support member, removable feed channel and nib may be very easily assembled and disassembled in a minimum of time; to provide a construction in which these various elements can be positioned in the barrel from the lower end, or that end adjacent the feed; and in general to provide an improved structure of the character referred to.

In the drawings:

Fig. 1 is a cross sectional view of one type of fountain pen, known as the cartridge pen, to which my improvement may be applied.

Fig. 2 is an enlarged plan view of the feeding element.

Fig. 3 is an end view of the construction shown in Fig. 2.

Fig. 4 is a plan view of the feeding element with the slip feed channel removed.

Fig. 5 is a side elevational view of the construction shown in Fig. 4.

Figs. 6 and 7 are plan and side views, respectively, of the removable slip feed channel, as removed.

Referring in detail to the drawings, 1 designates the barrel having the top screw cap 2 and closure cap 3 for the end adjacent the nib. The feeding element 4, which may have the puncturing point 5 on its inner end is adapted to be inserted into the barrel,

and may be provided with the saddle portion 6 on which the nib 7 may be supported.

The feeding element 4 is pressed in place in the barrel and may be held in position by a plug 8, which sets the feed in the pen barrel so that the puncturing point 5 will be accurately positioned relative the cartridge 9.

A sleeve seal 10 having exteriorly screw threaded inner end 11, may be inserted into the pen barrel from the writing end to surround the feeding element, the screw threaded inner end 11 registering with the screw thread on the cartridge 9, as shown in Fig. 1. The sleeve seal 10 may be provided with the aperture 12 to accommodate the plug 8. The sleeve seal features form the subject of a separate application.

That portion of the feeding element which supports the pen may be milled to form narrow slots shown at 13 and producing the usual type of comb feed, well known in the art. In the top of the feed may be cut a square duct 14, in which the slip channelled feed member 15 is adapted to be removably mounted. The removable element 15 may be provided with the longitudinal grooves 16. I have shown two grooves in this instance, but it is obvious there may be more or less, as desired. An aperture 17 is provided in the rounded end 18, to permit the insertion of a narrow instrument and provide a gripping surface for assisting in removing or positioning the element 15. The end is rounded at 18 to conform with the curvature of the feeding element 4. A shoulder 19 may be provided to accurately adjust the position of the removable element 15. The upper portion of the element 15 is preferably cut away as shown at 20, to allow an excess of ink to pass into the expansion space 21, formed between the shoulders 22 and 23, when the sleeve is in place on the feed and the feed inserted in the pen barrel. It has been found, by providing an expansion space of this character, that the danger of an excess flow due to expansion, is practically eliminated. With the normal functioning of the pen, there will be no appreciable accumulation of ink in this expansion space. The relatively blunt end of the puncturing point 5 presents a flat surface to the fluid body in the cartridge, to insure a proper feed.

Many of the advantages resulting from the use of the removable channelled feed 15,

will present themselves. For example, in the case of a plugged channel, as frequently occurs, it is only necessary to insert an instrument in the hole 17, remove the feed channel 15, and either replace same after cleaning or insert a new one where necessary or desirable. Thus, the channel 15 of the feed can be removed directly through the front, and another one inserted, without in the least disturbing the set of the pen or the feed.

I believe I am the first to make provision for an interchangeable and removable feed channel of this character, and although I have shown and described this feature as applied to a so called cartridge pen, it is clearly obvious and it must be understood, that it may be used with any type of fountain pen, and I do not wish to in any way, limit myself except as set forth in the appended claims.

Another advantage of this construction is that it is possible to check the pen setter, who occasionally, in setting a pen, will slightly overheat and jam the ink channels together, thus cutting down the passageway for the flow of ink. In this manner, the pen can be assembled and a solid block of rubber placed in the ink channels for setting purposes. When the pen is set and ready for use, as a last operation, a standard perfectly made removable slip channel 15 can be inserted, thus insuring a perfect feed channel in every pen leaving the factory.

From the foregoing description, it will be immediately apparent that the pen can be very readily assembled and disassembled, all the parts being inserted and removed from the front or feed end of the pen. To disassemble, the plug 8 and feed channel 15 may be first removed. Then the nib 7 and feed 4 and lastly, the sleeve 10, it being understood of course, that the cartridge 9 is first removed from the other end of the barrel.

I claim as my invention:

1. In a fountain pen, the combination with a barrel, of an ink supply therein, a feed bar having its inner end communicat-

ing with the ink supply, a nib mounted on the feed bar, said feed bar being longitudinally channeled throughout its entire length on the surface immediately below the nib, a channeled auxiliary feed element mounted in said longitudinal channel and insertable or removable therefrom without removing the feed bar from the barrel.

2. A fountain pen feed, comprising a nib supporting portion and a portion adapted to be mounted within the barrel, longitudinally channeled throughout its entire length, and a removable feed having ink conveying channels adapted to be removably mounted in the channeled portion of the feed and adjustable independently of movement of the feed.

3. A fountain pen feed, comprising a nib supporting portion and a portion adapted to be mounted within the barrel, and longitudinally channelled, a removable feed having ink grooves adapted to be mounted in the channelled portion, the feed being insertable or removable without disturbing the position of the other parts.

4. A fountain pen feed, comprising a nib supporting portion and a portion adapted to be mounted within the barrel, longitudinally channeled throughout its entire length, and a removable feed having ink conveying channels adapted to be removably mounted in the channeled portion of the feed and adjustable independently of movement of the feed, said removable feed having a shoulder portion to prevent excess inward movement.

5. A fountain pen feed, comprising a nib supporting portion and a portion adapted to be mounted within the barrel, longitudinally channeled throughout its entire length, and a removable feed having ink conveying channels adapted to be removably mounted in the channeled portion of the feed and adjustable independently of movement of the feed, the forward end of said removable feed being provided with an aperture to facilitate the insertion or removal of said feed.

ROBERT T. POLLOCK.