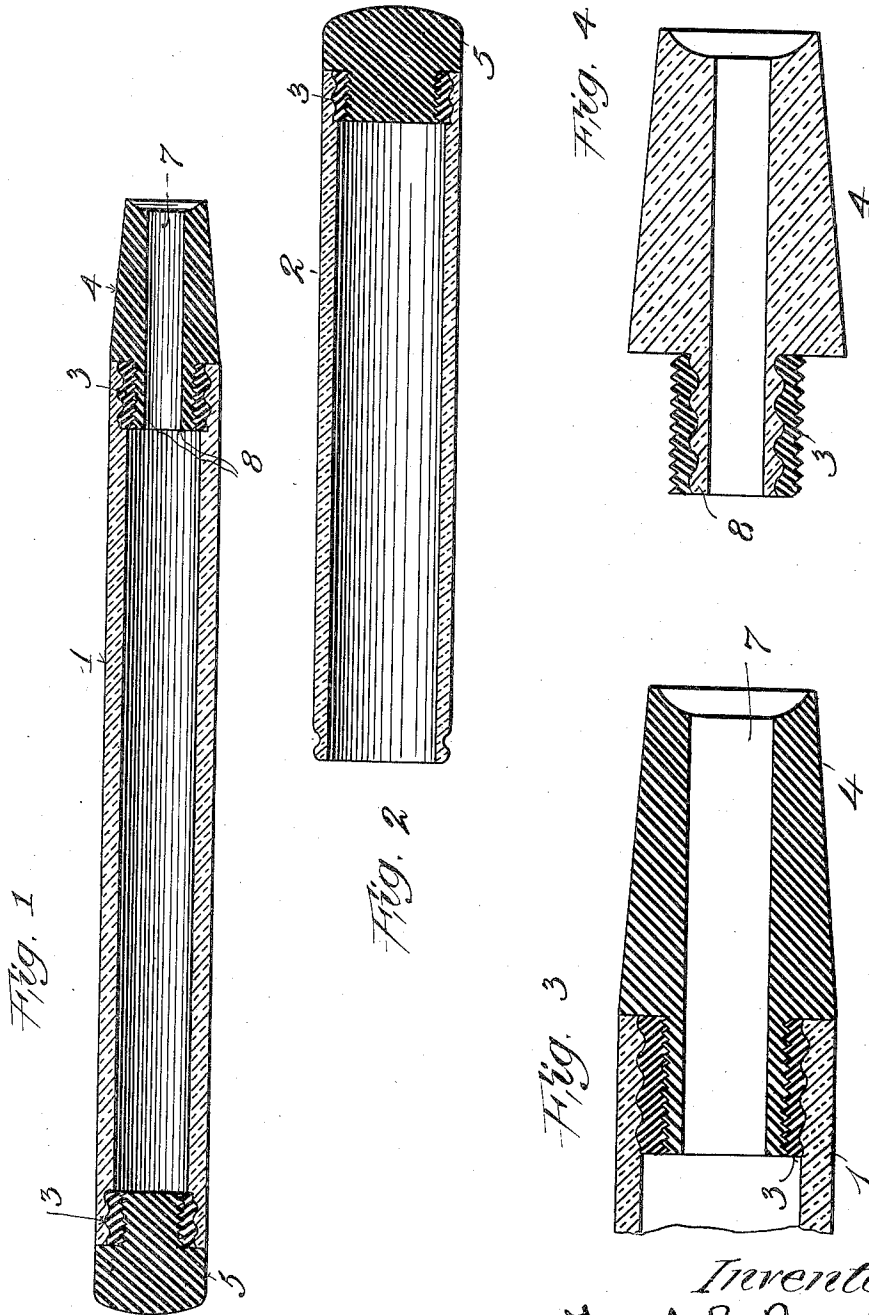


F. LE BOEUF.
FOUNTAIN PEN.
APPLICATION FILED JULY 17, 1918.

1,302,935.

Patented May 6, 1919.



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FOUNTAIN-PEN.

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Specification of Letters Patent.

Patented May 6, 1919.

Application filed July 17, 1918. Serial No. 245,314.

To all whom it may concern:

Be it known that I, FRANK LE BOEUF, a citizen of the United States, residing at Belleville, county of Essex, State of New Jersey, have made a certain new and useful Invention in Fountain-Pens, of which the following is a specification.

This invention relates to fountain pens.

The object of the invention is to provide a celluloid fountain pen.

A further object of the invention is to provide means for securing ink-tight joints between the various parts of a celluloid fountain pen.

A further object of the invention is to provide a celluloid fountain pen which may be manufactured from an endless tube of celluloid.

Further objects of the invention will appear more fully hereinafter.

The invention consists substantially in the construction, combination, location, and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown by the accompanying drawing, and finally pointed out in the appended claims.

Referring to the drawing:

Figure 1 is a view in section of the well portion of a fountain pen embodying my invention.

Fig. 2 is a similar view of the cap portion of a fountain pen.

Fig. 3 is an enlarged detail view of the pen holder portion of the fountain pen.

Fig. 4 is a view similar to Fig. 3 showing a modified construction of the pen holder.

The same part is designated by the same reference character wherever it occurs throughout the several views.

As above stated, it is among the special purposes of my present invention to provide a celluloid fountain pen. Due to the strength of celluloid and its resiliency as compared with the rubber from which fountain pens are at the present time manufactured, the advantages of supplying celluloid fountain pens have been recognized for years. The one disadvantage thereof encountered was the impossibility of securing ink-tight joints in the pen. It is well known that the ordinary rubber fountain pen is very susceptible to cracking and breakage due to other causes, while celluloid possessing greater resiliency and elasticity, is less liable to breakage. Furthermore celluloid may be obtained in

the form of tubes of any desired length or size. In accordance with my invention I employ tubes of celluloid of lengths cut as desired in accordance with the size pen desired, one tube indicated at 1 being utilized for the well portion, and another tube of relatively larger size indicated at 2 for the cap portion, the difference in size being sufficient to allow the cap portion of the pen to be inserted over either end of the well tube 1. To make the structure ink-tight, which is impossible in pens made entirely of celluloid, due to the expansion and contraction thereof caused by heat to which celluloid is especially susceptible, I provide a more or less resilient and elastic washer indicated at 3 suitably secured to the end of the wall tube 1 in any desired manner. While I have shown and will now describe one specific type of washer and means for securing the same to the well tube 1, I wish it to be understood that my invention as defined in the claims is not to be limited thereto as many other types of construction possessing the above characteristics may be employed and secured to the well shaft 1 in any suitable or desired manner. I show, however, the washer 3 as being of a ring of rubber of usual construction with large threads on its exterior periphery and relatively smaller threads on its interior periphery. The washer 3 is screwed into the well tube 1 in threads provided in the interior of the tube 3 which may be secured thereon in the usual well known manner. I prefer to coat the exterior surface of the ring or washer 3 with a suitable glue and allow the same to dry thus effecting a tight and permanent fit between the washer 3 and the tube 1. The pen holder indicated at 4 is provided with an extension 8 of relatively narrow diameter provided with exterior threads adapted to engage in the interior threads of the washer 3. Thus it will be seen that an ink-tight joint is secured between the pen holder 4 and the tube 1 which is not affected by any expansion or contraction of the tube 1. The holder 4 may be of any desired material in accordance with the individual wish or desire of the one using the pen. Where celluloid tubing of whitish color is employed the guide 4 may be of white bone to give uniformity of color, or it may be of rubber or any other suitable material of any desired shape or color.

The pen is secured in the holder 4 in the usual manner well understood in the art and consequently not illustrated. The outer end of the tube 1 is provided with a washer 3 similar to the washer hereinbefore described, in the interior threads of which is secured a top 5 of any suitable material, shape or color, but preferably in conformity with the color or longitudinal shape of 1, 2 and 4.

10 For example, if bone is used for the holder 4 and white celluloid for the tube 1 the top 5 may be of white bone. A further advantage of this construction is that the interior of the tube which forms the well of the fountain pen feeding through the tube 7 in the holder 4 to the pen in the usual well known manner enables the refilling of the well 1 without the necessity of removing the holder 4 as is the common practice of the fountain pens now in use which are not of the self-filling type. If desired, and as shown in Fig. 2, the cap 2 may be of celluloid, and as shown in Fig. 4 the guide 4 may likewise be of celluloid, in which last modification, if desired, the resilient washer 3 may be permanently secured to the projection 8 of the member 4, in the manner hereinbefore described in connection with means for securing the washer 3 to the tube 1. The only difference in construction between the cap 2 and the tube 1, as above stated, is that the former is of slightly larger diameter to enable same to be fitted over either end of the tube 1, but the feature of securing an ink-tight jointure between the top 5 and the cap is similar with the construction shown in connection with the top 5 in Fig. 1. By employing a removable top 5 in connection with the cap shown in Fig. 2 it is possible to

40 manufacture the caps from endless tubing as

hereinbefore described in connection with the well portion of the fountain pen.

Having now set forth the objects and nature of my invention, and having shown and described a structure embodying the features thereof, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent, is,—

1. In a fountain pen, the combination with a celluloid tube, of a pen holder, a washer permanently attached to the interior wall of said tube, and means for detachably securing said holder to said washer.

2. In a fountain pen structure, the combination with a celluloid tube, a holder and a top for opposite ends of said tube, washers permanently secured to the interior wall of said tube at the ends thereof, and means for detachably securing said holder and said top to said washers to render the well thus formed in said tube ink-tight.

3. The combination with a celluloid tube, of a bone holder, a rubber washer permanently carried on the interior wall of said tube and provided with threads, said bone holder being provided with threads to allow same to be detachably screwed into said washer.

4. In a fountain pen the combination with a celluloid tube provided with threads on the interior wall of the end thereof, of a rubber washer provided with interior and exterior threads adapted to screw into said tube, a pen holder provided with exterior threads adapted to screw into said washer subsequently as shown and described.

In testimony whereof I have hereunto set my hand on this 10th day of July, A. D. 1918.

FRANK LE BOEUF.