

No. 793,598.

PATENTED JUNE 27, 1905.

J. G. MARSHALL.
FOUNTAIN PEN.

APPLICATION FILED JUNE 18, 1904.

Fig. 1.

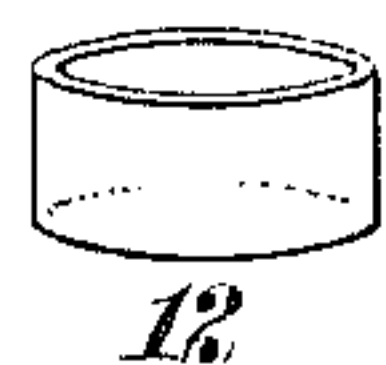
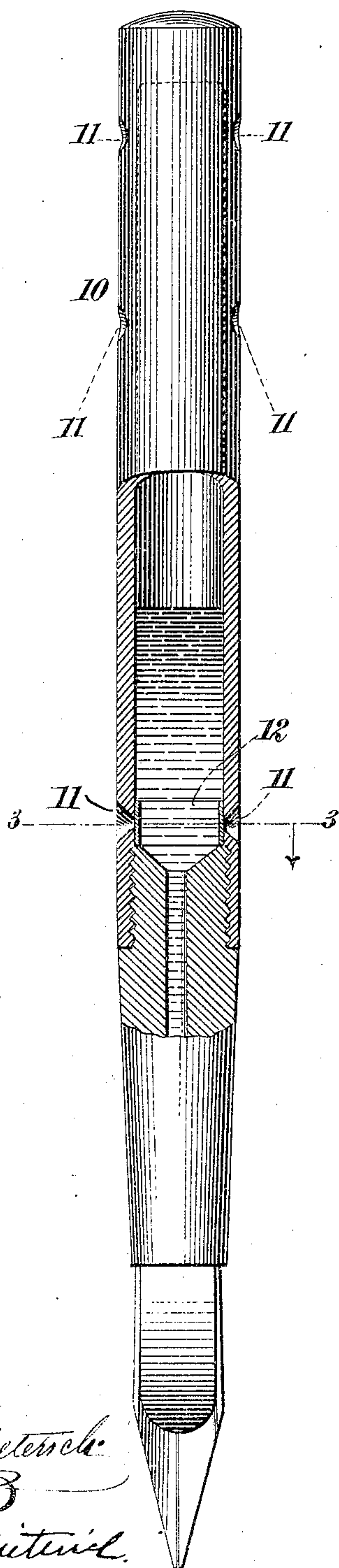


Fig. 2.

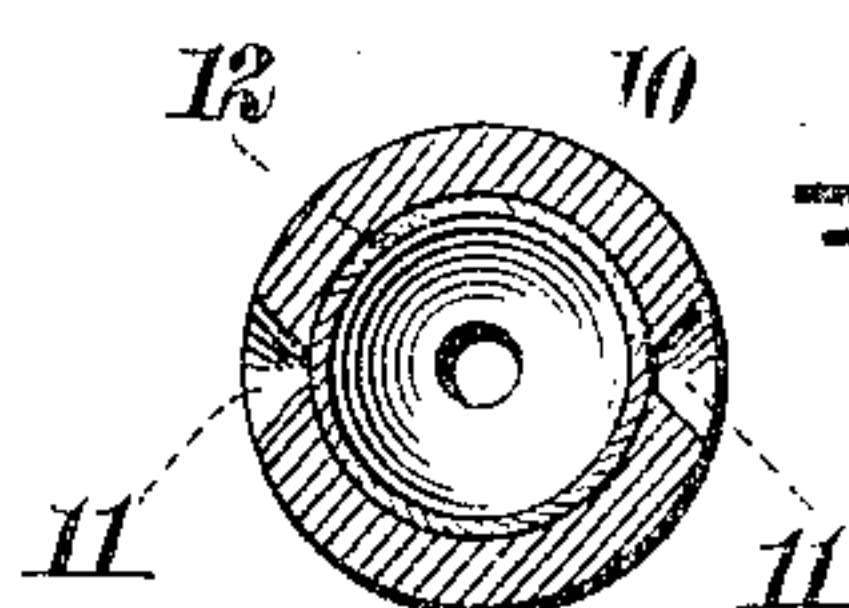


Fig. 3.

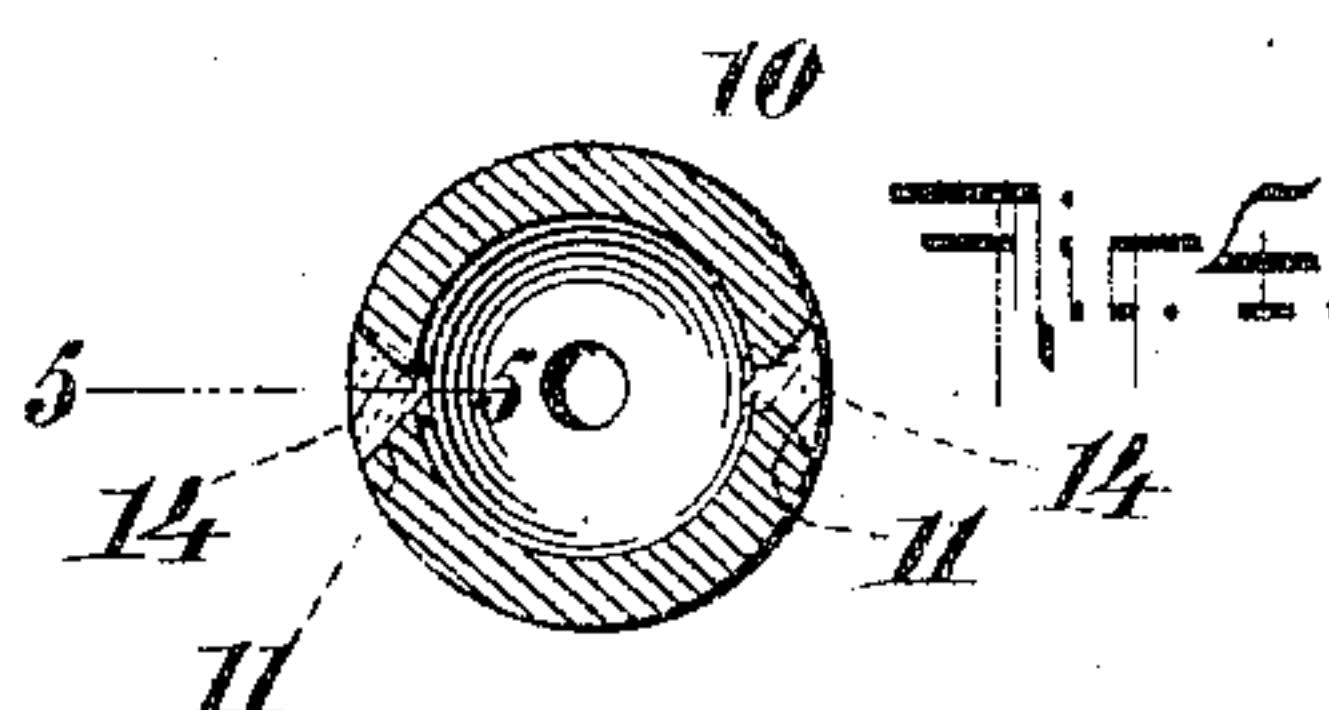
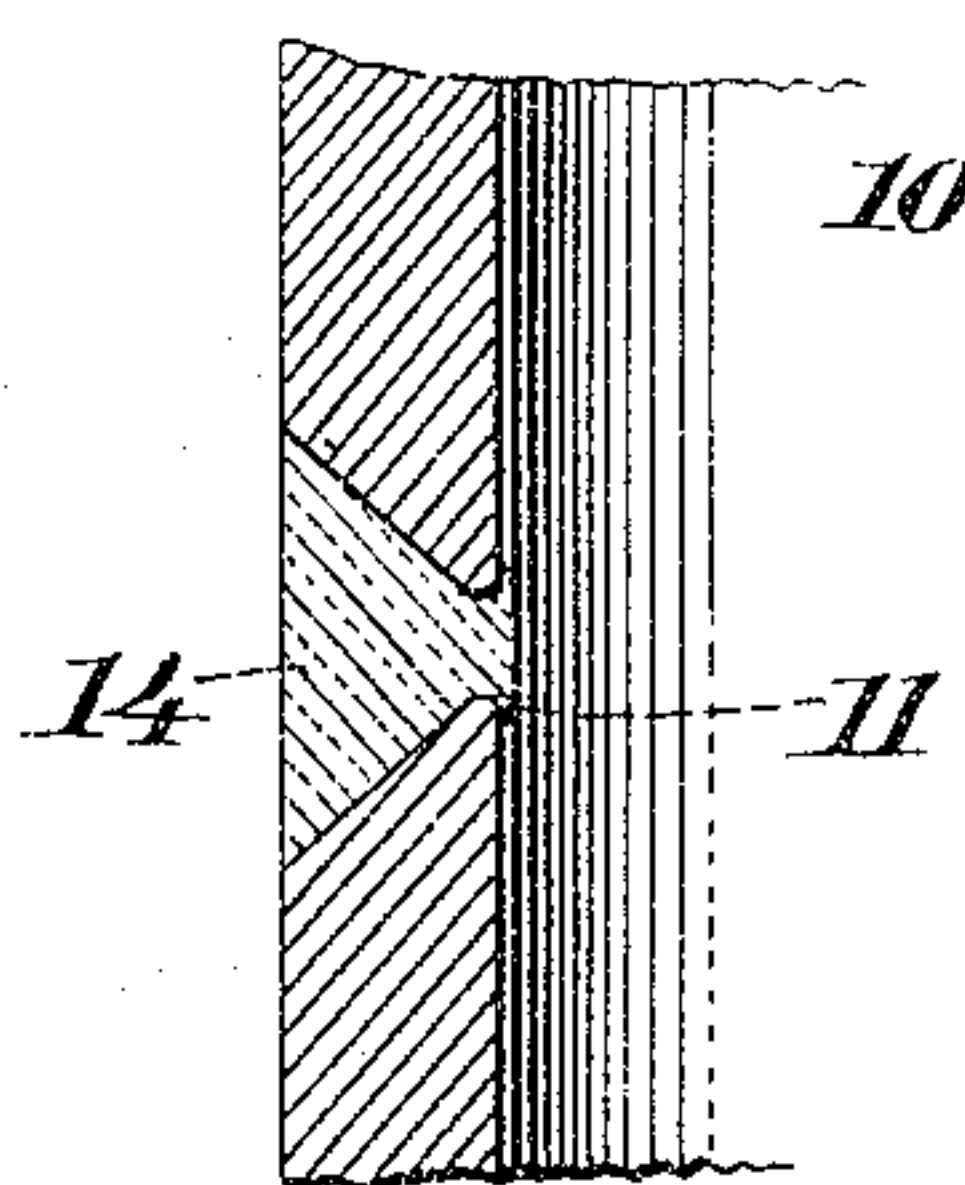


Fig. 4.

Fig. 5.



WITNESSES:

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FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 793,598, dated June 27, 1905.

Application filed June 18, 1904. Serial No. 213,083.

To all whom it may concern:

Be it known that I, JAMES G. MARSHALL, a citizen of Turkey, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

The invention relates to improvements in fountain-pens; and it consists in a novel construction of the barrel or font portion of the pen, enabling the holder of the pen to conveniently ascertain what quantity of ink is within the font.

In carrying out my invention I provide the opposite sides of the barrel or font of the pen with small alined transverse apertures and close these apertures with a transparent substance, such preferably as transparent celluloid or equivalent material, so that no leakage may occur at said apertures and that when the level of the ink is below said apertures the light may be seen through said transparent material, and thus indicate the quantity of ink remaining within the font.

It has been attempted heretofore to provide fountain-pens with means enabling the user of the pen to determine the quantity of ink remaining within the font; but such attempts have not been successful from a practical standpoint, for several reasons, among which it may be mentioned that in such attempts the barrel of the pen had to be specially constructed to receive said means; that leakage occurred at the joints in the barrel; that the barrel lacked the smooth finish required for the comfortable use of the pen; that the barrel was unduly weakened, and that the expense of manufacture was unduly increased.

In accordance with my invention I preserve to the maximum degree the usual appearance and construction of the barrel of the pen and in no manner weaken or impair said barrel and in addition only slightly, if at all, increase the cost of manufacture and produce a structure the parts of which have substantially a coefficient of expansion and contraction, whereby the creation of fissures or leak-spots in the font is impossible.

The invention will be fully understood from

the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in central vertical section, of a fountain-pen constructed in accordance with and embodying the invention. Fig. 2 is a detached perspective view of a transparent celluloid band employed to seal the sight-apertures in the font portion of the pen. Fig. 3 is a transverse section of the pen on the dotted line 3 3 of Fig. 1. Fig. 4 is a like section showing a modification of the invention, and Fig. 5 is a vertical section of same on the dotted line 5 5 of Fig. 4.

In the drawings, 10 designates the barrel or font of a fountain-pen, all the parts of which are of well-known and usual construction with the exception of the special features constituting my invention and which are applied to said barrel.

In the opposite sides of the barrel or font I form the small transverse alined apertures 11, which are substantially of conical form at their outer portions and have short parallel walls at their inner portions, as shown, and I may say here that this construction of aperture is important in that the conical portion thereof directs the eye to the small sight-opening and that the material of the barrel is not, around the inner end of the apertures, reduced to a knife-edge.

The alined apertures 11 are in the construction shown in Figs. 1 and 3 closed by thin transparent bands 12 of plastic or non-fragile material, preferably celluloid or equivalent pyroxylin compound, which bands are introduced into the barrel 10 and firmly cemented in position. The bands 12 are thin and flexible, and being thin they do not materially reduce the capacity of the font, and being flexible they may initially yield to pressure applied through the apertures 11 and admit of the introduction of cement through said apertures and to the outer surface of said bands around said apertures, after which and while such cement is in the process of drying the tendency of said bands to return to their original shape causes them to exert a pressure

against the cement and insure the formation of an absolutely tight joint around said apertures, rendering leakage at said apertures impossible. The cement I employ for securing the bands 12 in position is transparent and commonly called "celluloid" cement, being of pyroxylin character.

In the present instance I illustrate a font possessing several pairs of the alined apertures 11 for greater convenience in determining the quantity of ink remaining within said font; but my invention is not limited to the employment of any special number of the said apertures, since it is sufficient that one pair of said apertures be provided near one end of the font, this end preferably being the upper end of the pen, so that a person may upon removing the pen from his pocket and without removing the cap from pen proper (the pen as a whole then being upside down) ascertain approximately the quantity of ink remaining within the font. I prefer to apply one pair of the apertures reasonably near to the upper end of the font and another pair of said apertures about one-third down from the upper end of the font, because of the convenience such apertures afford in ascertaining the quantity of ink remaining within the font.

I illustrate in Fig. 1 the preferred embodiment of my invention, and in Figs. 4 and 5 I show a modified construction presenting many of the advantages of that represented in Fig. 1. In the modification shown in Figs. 4 and 5 I provide the apertures 11, but omit the sealing-bands 12, and in lieu thereof fill the apertures 11 with transparent celluloid or equivalent plastic material 14, this material 14 extending slightly through said apertures and against the inner walls of the font immediately surrounding said apertures and adhering to said walls and the walls of said apertures and becoming, in effect, integral with the material of the font, whereby the said apertures become securely sealed by means which are transparent and have substantially a coefficient of expansion and contraction with the material of the barrel or font 10, which is usually formed of plastic material, such as rubber or celluloid or the like. I prefer to employ the bands 12 on the inner side of the barrel 10 because they efficiently seal the apertures 11 and may be made so thin that the light may be readily observed through the same. In both forms of my invention the apertures are intermediate the ends of the barrel or font and in no manner weaken or vary the usual construction of said ends. I have hereinbefore named the preferred transparent material for sealing the apertures 11, and I

recommend the use of said material as affording highly-satisfactory results; but I do not in every instance limit the invention to the employment of celluloid for sealing said apertures.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a fountain-pen, the font having oppositely-disposed transverse apertures in its sides, and transparent pyroxylin material closing said apertures and united with said font; substantially as set forth.

2. In a fountain-pen, the font having the oppositely-disposed transverse apertures in its sides, said apertures being of conical form at their outer portion, and transparent material closing said apertures; substantially as set forth.

3. In a fountain-pen, the font having oppositely-disposed transverse apertures in its sides, and a band of transparent material secured at the inner side of said font and over the inner ends of said apertures; substantially as set forth.

4. In a fountain-pen, the font having oppositely-disposed transverse apertures in its sides, and a band of transparent celluloid or equivalent material secured at the inner side of said font and over the inner ends of said apertures; substantially as set forth.

5. In a fountain-pen, the font having oppositely-disposed transverse apertures in its sides, said apertures being of conical form at their outer portion and at their inner portion having parallel walls, and the band of transparent celluloid or equivalent material secured within said font and over the inner ends of said apertures; substantially as set forth.

6. In a fountain-pen, the font having intermediate its end portions the oppositely-disposed small transverse apertures, and transparent pyroxylin material closing said apertures and united with said font along the edges of said apertures; substantially as set forth.

7. In a fountain-pen, the font having intermediate its end portions a series of pairs of oppositely-disposed small transverse apertures, and transparent pyroxylin material closing said apertures and united with said font along the edges of said apertures; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 13th day of June, A. D. 1904.

JAMES G. MARSHALL.

Witnesses:

WILLIAM A. ZEIDLER,
FREDERICK A. BLACK.