



(Under International Convention.)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in the United States), } 24th Jan., 1910

Date of Application (in the United Kingdom), 4th Jan., 1911

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 23rd Feb., 1911

COMPLETE SPECIFICATION.

Improvements in Fountain Pens.

I, FELIX RIESENBERG, of Livingston Hall, Columbia University, New York City, in the County and State of New York, United States of America, Civil Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and
5 by the following statement:—

My invention relates to fountain pens and in particular to means whereby the amount of ink contained in the font of the pen can be ascertained from the outside at any time, the particular means employed affording various advantages which will be referred to hereinafter.

10 In the accompanying drawings illustrating my invention,

Figure 1 represents a full view of a fountain pen embodying my improvement.

Figure 2 represents a longitudinal section through the font on the line $x-x$ in Figure 1.

15 Figure 3 represents a transverse section on the line $y-y$ in Figure 1.

Figure 4 is a plan view in larger scale of one of the lenses 5 illustrated in Figures 1 and 2.

Figure 5 represents a transverse section through the lens shown in Figure 4 on the line A—B.

20 Figure 6 is a transverse section through the lens shown in Figure 4 on the line C—D.

For the purpose of ascertaining the amount of fluid contained in the font of the pen, I employ one or more lenses 5, on the font. When employing a plurality of lenses they are preferably arranged in a row at suitable intervals—
25 as shown in Figures 1 & 2. While these lenses may consist of any suitable material, I prefer a clear annealed glass with which I have obtained the best results. These lenses are preferably round and are preferably provided with a shoulder 2 near the outer face of the lens, as shown in Figures 2 and 3, with which they rest in a suitably shaped opening in the wall of the font as shown
30 in Figure 2. The lenses may be cemented onto their seats by any kind of cement or similar material, however preferably by means of rubber cement, which I find will keep the seats tight in spite of the slight expansion of the

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Riesenberg's Improvements in Fountain Pens.

font by the heat when carried in the pocket. The shape of the lenses is preferably so that their outer face will conform with the outer surface of the font so that no crevices or grooves are produced at the joint between the glass and the font, in which dirt can collect. For this reason, I have formed these lenses at their outer face cylindrical, so that these outer faces form in the direction *a—b*, Figure 4, (which is longitudinal to the parallel axis of the font a plane as shown at *a*, Figure 5, while in the direction *c—d* transverse thereto, these lenses are convex and conform with the cylinder formed by the font as shown at *a* in Figure 6. The inner face of each lens is preferably convex as shown at *b* Figures 5 and 6 and also in Figures 2 and 3, by which I obtain the best results. It is obvious, however, that any other lens combination which is adapted to properly enlarge the image of the opposite wall 4 of the font is suitable for this purpose. The inside of the font opposite from where the lenses are disposed is colored light by any suitable means, for instance by enamel or also by any other suitable light reflecting material as indicated at 4 so that the observer can easily ascertain through any of the lenses whether the portion of the font where the particular lens is located contains ink or not.

By employing lenses instead of plane glass as has been suggested in similar devices, I gain the advantage of more clearly showing to the observer whether the font contains ink or not, owing to the magnifying qualities of the lenses, which are obviously of such construction that they are focused to the light reflecting surface.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

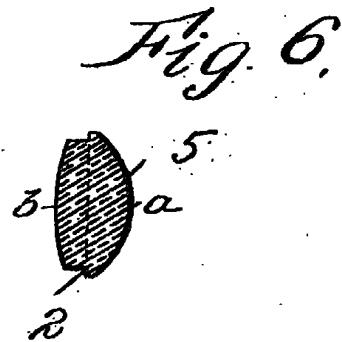
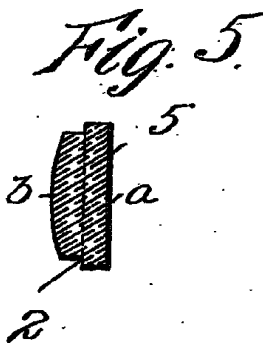
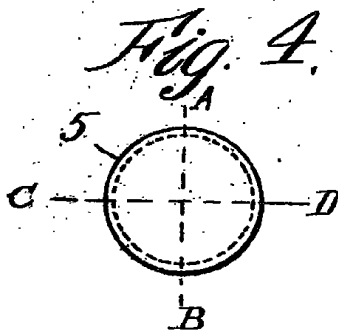
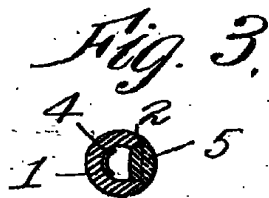
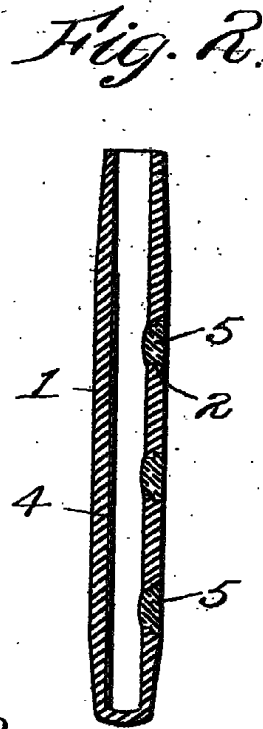
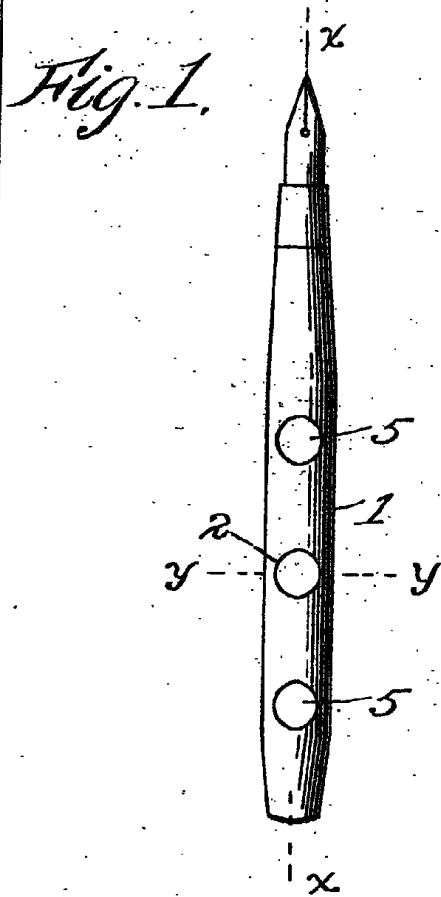
1. In a fountain pen, a font having a generally opaque body provided with one or more sight openings closed by a lens or lenses adapted to concentrate the light within the font, and having within the font opposite the opening or each opening a surface of color contrasting with the ink to be contained in the font arranged to receive the light passing through said lens or lenses.

2. In a construction such as described in Claim 1, the lenses arranged in series longitudinally of the font.

Dated this 4th day of January, 1911.

FELIX RIESENBERG.

[This Drawing is a reproduction of the Original on a reduced scale.]



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