May 16, 1933. J. WALLACE 1,909,194

FOUNTAIN PEN

Filed May 27, 1931

Fig. 1

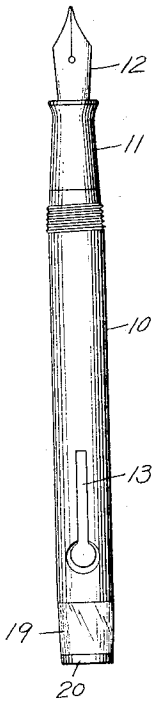



Fig. 2

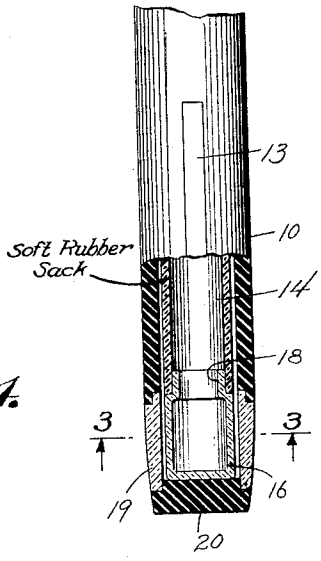



Fig. 4.

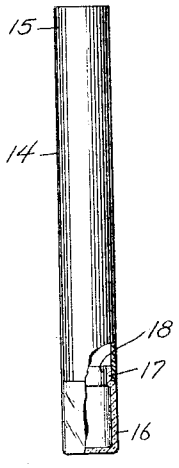
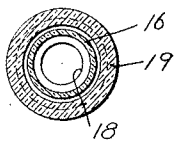



Fig. 3

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Patented May 16, 1933 1,909,194

# UNITED STATES PATENT OFFICE

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## FOUNTAIN PEN

Application filed May 27, 1931. Serial No. 540,243.

This invention relates to fountain pens, and particularly to the provision of means for metering or indicating the presence of fluid in the ink reservoir or sack of pens of this class; and the object of the invention is to provide the flexible, ink containing tube or reservoir of a pen with a transparent body attached to the lower closed end of said tube whereby the contents of ink in said tube may be seen therethrough; a further object being to provide means on the barrel of the pen for rendering the transparent member of said tube or fluid container visible to detect the presence of ink therein; a further object being to provide the barrel of the pen with a transparent band arranged in registering alinement with the transparent member of the ink containing tube whereby the contents of ink therein may be visible through said transparent band of the barrel; and with these and other objects in view, the invention consists in a fountain pen of the class and for the purpose specified, which is simple in construction, efficient in use, and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a side view of one form of pen made according to my invention.

Fig. 2 is an enlarged, sectional, detail view of the pen shown in Fig. 1, with part of the construction broken away.

Fig. 3 is a section on the line 3—3 of Fig. 2; and,

Fig. 4 is a detail view of the ink tube or reservoir of the pen detached.

In Figs. 1 to 3 inclusive, I have shown one method of carrying my invention into effect. In said figures, 10 represents the barrel of the fountain pen. At 11, I have shown the section or tip detachable with respect to the open end of the barrel and supporting the usual pen point 12, and the ink feed of said pen point as in other pens of this class. At 13, I have indicated the usual lever in the barrel of the pen for compressing the flexible ink sack, tube or reservoir 14, and the upper open end of which is coupled with the inner end of the section in the usual manner. In practice, the open end 15 of the tube is coupled with the section 11 in the usual manner.

In carrying my invention into effect, I mount in connection with the normally closed end of the tube 14, a thimble-shaped transparent member 16, secured to the lower end of the tube 14 as seen at 17 so as to provide a smooth, outer wall structure to the complete container, which result is accomplished by providing an inwardly offset neck 18 at the upper open end of the member 16. The member 16 may be composed of any suitable transparent material, and it is preferred to use glass by virtue of the clear transparency thereof, although other transparent materials may be employed in the construction of said member.

In the structure shown in Figs. 1 to 3 inclusive, I mount in the barrel of the pen 10 at the closed end thereof, a band or collar 19 of suitable transparent material, which is cemented or otherwise secured in position between the end of the barrel 10 and a cap portion 20. A band 19 is arranged in alinement with the member 16 so that at all times the fluid contents in the tube 14 may be clearly seen and the user of the pen will be advised at all times of the existence of fluid in the pen and will know just when it is necessary to replenish the ink fluid. In order to avoid breakage, I prefer to construct the band or transparent end 19 of the barrel of a non-breakable, transparent material, such for

example as celluloid. It will be understood, however, that any transparent material may be employed.

I am aware of the fact that other attempts have been made in the past to indicate the presence of fluid in the container or reservoir of a fountain pen, but the distinctive feature of my invention resides in providing the lower end of a flexible ink containing sack or tube with a transparent member forming the closed end of the tube which will provide means for indicating to the user, the presence of ink in the pen. The transparent end of the container tube 14 will be of sufficient length to show the presence of enough fluid to care for a comparatively long period of writing and give due notice to the user of the necessity of refilling the pen. Further, my invention resides in the provision of means at the end of the barrel of the pen arranged adjacent and in registering alinement with the transparent member of the container tube to permit the user to readily see the fluid contents of the tube without the necessity of removing the tube 14 from the barrel.

It will be understood that my invention is not necessarily limited to the specific details of construction herein shown and described, and various changes in and modifications of the construction may be made within the scope of the appended claims without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a fountain pen of the class described, a pen barrel, the closed end portion of which is provided with a body of transparent material rendering the interior of the closed end of the barrel visible, and said transparent body being in the form of an annular band disposed between the end proper of said barrel and a cap forming the end wall of the barrel.

2. In a fountain pen of the class described, a pen barrel, the closed end portion of which is provided with a body of transparent material rendering the interior of the closed end of the barrel visible, said transparent body being in the form of an annular band disposed between the end proper of said barrel and a cap forming the end wall of the barrel, and the inner and outer surfaces of said transparent band being in alinement with corresponding surfaces of the pen barrel.

3. In a fountain pen of the class described, a pen barrel, the closed end portion of which is provided with a body of transparent material rendering the interior of the closed end of the barrel visible, said transparent body being in the form of an annular band disposed between the end proper of said barrel and a cap forming the end wall of the barrel, the inner and outer surfaces of said transparent band being in alinement with corresponding surfaces of the pen barrel, and said cap fitting over the outer edge of said band and projecting therebeyond and including a portion projecting into and fitting snugly in the bore of said band.

In testimony that I claim the foregoing as my invention I have signed my name this 22nd day of May 1931.

JOSEPH WALLACE.