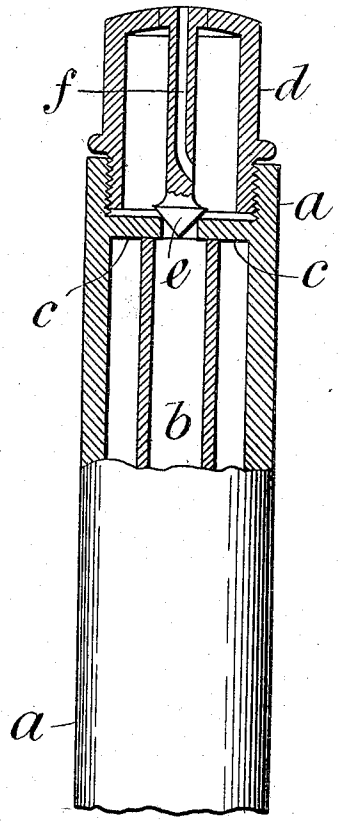
E. DE LA RUE.

STYLOGRAPHIC PEN,

APPLICATION FILED JUNE 12, 1908.

921,007. Patented May 11, 1909.



Witnesses.

M. S. Adams.

E. B. Franzoni.

Inventor.

Evelyn de la Rue,

By his Attorneys,

Baldwin & Wight

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EVELYN DE LA RUE, OF LONDON, ENGLAND.

STYLOGRAPHIC PEN.

No. 921,007. Specification of Letters Patent. Patented May 11, 1909.

Application filed June 12, 1908. Serial No. 438,109.

To all whom it may concern:

Be it known that I, EVELYN DE LA RUE, manufacturer, a subject of the King of Great Britain, residing at 110 Bunhill Row, in the city of London, England, have invented new and useful Improvements in Stylographic Pens, of which the following is a specification.

The object of this invention is to render a stylographic pen perfectly ink tight so that no leakage can occur in the pocket of the user. With this object in view I provide the pen with an air duct or tube which extends from the outer or upper end of the barrel down into it to a point below the normal ink level therein and through which air is conveyed downwardly to the lower portion of the barrel and I provide means for closing the upper or outer end of the air duct which is operated by the movement of a detachable cap which contains an ink trap and air cell. The arrangement is such that air passes through the wall of the cap into the air cell and thence it passes through the air tube down into the lower portion of the barrel or reservoir of the pen. The trap is formed by providing the cap with a plug which is so formed at its lower end as to provide a valve regulating the admission of air to the air duct and by means of which the outer end of the air duct may be completely closed, and this plug has a channel in it extending from the outside of the top of the cap part way through the plug and communicating with the air cell by a branch passage located some distance above the lower end of the plug and a considerable distance below the upper end thereof so that should ink by any chance pass through the air duct into the cap it will be trapped therein whether the pen be arranged in an upright position or inverted.

The accompanying drawing shows part of a stylographic pen illustrating one way of carrying out this invention.

a is the barrel which constitutes the reservoir for the ink.

b is the air duct or tube, the upper end of which butts against and is steadied by an annular shoulder *c*, at the upper end of the barrel. This tube extends down into the barrel and it communicates with the lower portion of the interior thereof in any suitable way so that air passing down through the tube may enter the barrel and act upon the ink in the usual way in this class of pens.

d is the cap which has a screw connection with the upper end of the barrel above the annular shoulder *c*. The cap is hollow but is provided with a centrally arranged plug *f* which may be formed in one piece with the cap or it may be a separate piece secured to it in any suitable way. The air hole in the plug may be conveniently bored down the middle of the plug but communicates with the interior of the cap by a branch passage some distance above the lower end of the plug or above the valve *e*.

When the cap is screwed home the valve *e* seats itself on the shoulder *c* and so closes the end of the air duct. When thus closed it is impossible for ink to flow through the air duct into the cap. The cap must of course be slightly unscrewed when the pen is to be used; and even when the cap is slightly unscrewed and the valve is open, should there be any ink in the tube *b* which would flow past the valve it would be trapped and be prevented from entering the air hole in the plug even though the pen be inverted. It will be observed that there is no direct communication between the barrel or reservoir and the interior of the cap. Such connection is made only through the air duct *b* which extends down into the barrel to a point below the normal ink level therein, and the possibility of ink passing through the air tube *b* and into the cap is remote.

The means for closing the air duct, as shown, is directly connected to the cap but there is no necessity for this so long as the whole is so arranged that the air duct can be closed by the movement of the cap.

I claim as my invention:

1. In a stylographic pen, the combination of a barrel, an air duct in the barrel leading from the top thereof down into the barrel to a point below the normal ink level therein, a cap containing an air cell and ink trap connected to the outer or upper end of the bar-

rel above the upper end of the air duct, and means operated by the movement of the cap for closing the air duct.

2. In a stylographic pen, the combination of a barrel, an air duct in the barrel leading from the top thereof down into the barrel to a point below the normal ink level therein, a cap attached to the upper end of the barrel containing an air cell and ink trap, and a plug carried by the cap and adapted to close the air duct.

EVELYN DE LA RUE.

Witnesses:
H. D. JAMESON,
F. L. RAND.