March 23, 1926. 1,577,548

H. J. UPTON

FOUNTAIN PEN

Filed Jan. 12, 1925

Fig. 1

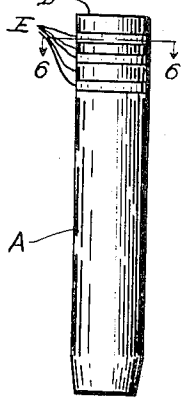


Fig. 2

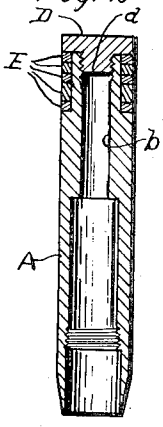


Fig. 3

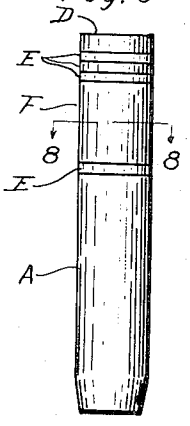


Fig. 4

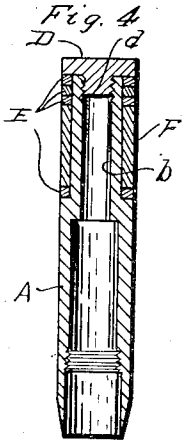


Fig. 5

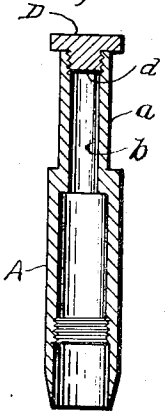


Fig. 6

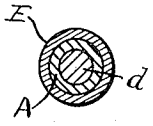


Fig. 7

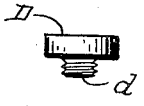


Fig. 8

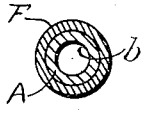


Fig. 9

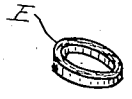


Fig. 10

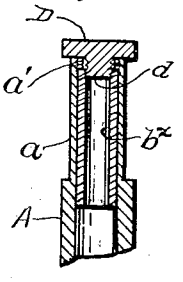
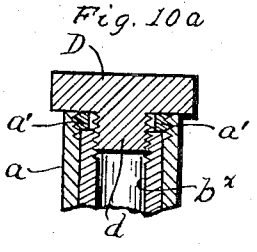


Fig. 10a



Henry J. Upton,
INVENTOR.
By Mitchell, Chadwick & Kent,
ATTORNEYS.

Patented Mar. 23, 1926. 1,577,548

UNITED STATES PATENT OFFICE.

HENRY J. UPTON, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO THE MOORE PEN CO., OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

FOUNTAIN PEN.

Application filed January 12, 1925. Serial No. 1,720.

To all whom it may concern:

Be it known that I, HENRY J. UPTON, a citizen of the United States, residing at Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Fountain Pens, of which the following is a specification.

My invention is a new cap for fountain pens and the like, designed to permit the application of distinctive devices to the outer surface of the cap in a simple, efficient and economical manner, without sacrifice of the qualities of the cap as a pen closure and without in any manner weakening it.

In the drawings:

Figure 1 is an elevation of a cap embodying my invention, showing rings applied;

Figure 2 is a longitudinal section of the cap of Figure 1;

Figure 3 is an elevation similar to Figure 1, but showing a long seat and rings spaced by the use of a long ferrule;

Figure 4 is a longitudinal section of the cap of Figure 3;

Figure 5 is similar to Figure 4, the applied rings however being omitted;

Figure 6 is a cross-section on line 6—6 of Figure 1;

Figure 7 is a view of the locking member;

Figure 8 is a cross-section on line 8—8 of Figure 3;

Figure 9 is a perspective view of a ring;

Figure 10 is a longitudinal section of the upper part of a cap, showing a modification;

Figure 10^a is an enlarged detail of Figure 10.

Rings of various materials, as metal, hard rubber, celluloid and the like, have heretofore been applied to the outer surfaces of fountain pen caps, for purposes of distinction, and the application has been a relatively slow and expensive process, the rings being sprung into position in shallow prepared grooves in the outer surface of the cap or pen. In accomplishing this, much waste of material by breakage took place and the process was in itself slow and was also expensive, requiring skilled labor.

It is an object of my invention to make it possible to apply such rings to the outer surface with a minimum of expense, trouble and breakage and in any desired position, and to be able to employ in the work unskilled labor.

In accordance with my invention the cap is formed of two inner diameters, the larger diameter being at the open end of the cap, the cap being thus, within, made in two chambers, separated by a shoulder, which is adapted to contact with the end of the fountain when the cap is placed upon the pen end of the fountain pen, to close the same.

It will be obvious that the small, inner cap chamber is adapted to receive the gold pen point and it will be obvious also that the walls of the cap at this part of its length are of much greater thickness than they are at other parts of the cap.

Upon the outer surface of the cap at the closed end thereof I reduce the outside diameter of the cap to form a cylindrical seat, for rings of material to be applied to the outer surface of the cap, the wall being reinforced at this part of the cap by the inner chamber wall so that the operation does not unduly weaken the cap or interfere in any manner with the performance of its function as a pen closure. The cap, as so prepared and shaped is shown in Figure 5, A, being the cap generally, *a*, the seat portion and *b* the wall of the small chamber. The open outer end of the small chamber of the cap is screw threaded and cooperating with this threaded opening is a mushroom clamping member, made up of a head D and a threaded tang *d*. The head is preferably of a diameter substantially equal to the outside diameter of the cap before the formation of the seat, *a*, but it may obviously be of greater diameter and of an ornate form, if desired. The rings E or ferrule F, to be applied, are of an inner diameter equal to the outer diameter of the seat, *a*, and are preferably of a thickness equal to the depth of the seat or they may be of any desired thickness. The width or length of the ring or rings or ferrule is such that when assembled upon the seat the seat will be filled. The clamping member D is now screwed to place, the under side of the head engaging the adjacent applied ring and clamping the rings and ferrules upon the seat, against movement on the seat. The seat may be made of relatively great depth enabling the employment of rings of relatively great thickness, an advantage in manufacture and

application, eliminating in large part the element of breakage and waste.

It will now be clear that the outer surface of a cap may have applied to it sections of different material, metal, hard rubber, celluloid or the like and of different colors, for purposes of ornament or distinction, at a minimum of cost and with a maximum of stability, the resultant cap appearing visually to be of unitary construction. This assembly may be effected by unskilled labor as it calls for no more than the placing upon the seat of the designed rings or ferrules, in the designed order.

It will be obvious that any desired combination and spacing of rings and ferrules, within the length capacity of the seat may be obtained, or a single tube or ferrule of a desired material and color may be applied to cover the entire seat.

In Figure 10, I show an alternative construction, especially useful when it is desired to adapt tubular material not specially designed for use in the making of my new cap. In this construction the inner surface of the outer shell or tube of the cap, before the formation of the seat, a, is screw threaded, at its upper or rear end, and a threaded ring, a', is screwed in. An inner tubular member, b^x, having screw threads on its inner upper or rear end, corresponding to the threads on the tang, d, of the clamp member D, is forced into the outer shell to an abutment on ring, a', being a tight fit for the shell. The seat, a, is now formed and the outer rings emplaced and the tang, d, of clamp member D is screwed into the interior screw threads of member b^x.

I claim:

1. The pen cap above described, made up of a tube having walls of two diameters within separated by a shoulder abutment and two diameters without separated by a shoulder abutment the smaller diameters of the tube within and without being at the same end of the tube and the smaller inner diameter being screw threaded at its outer end; a ring or rings fitting upon the smaller exterior surface of the tube; a clamping plug, made up of a head of greater diameter than the small outer diameter of the tube and having a screw threaded tang to cooperate with the threaded open end of the smaller interior diameter of the tube, to close one end of the cap and clamp the fitted rings upon the outer surface of the tube, between the clamping head and the shoulder abutment.

2. The pen cap above described, made up of a cap tube having two diameters upon its outer surface separated by a shoulder abutment the smaller diameter at the rear end of the cap, being screw threaded within at the opening; a ring or rings fitting upon the smaller exterior surface of the tube; a clamping plug, made up of a head of greater diameter than the small outer diameter of the tube and having a screw threaded tang to cooperate with the threaded open end of the interior diameter of the tube, to close one end of the cap and clamp the fitted rings upon the outer surface of the tube between the clamping head and the shoulder abutment.

Signed at Boston, Massachusetts, this ninth day of January 1925.

HENRY J. UPTON.