



# UNITED STATES PATENT OFFICE.

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## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 747,948, dated December 29, 1903.

Application filed May 5, 1902. Serial No. 105,391. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. CUSHMAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

This invention has relation to fountain-pens, and has for its object to provide certain improvements therein for the purpose of insuring the pen against leakage when carried in the pocket and to render it more comfortable in the grasp of the fingers when used for writing.

Of the accompanying drawings, Figure 1 represents the pen in longitudinal section with the spindle retracted and the cap closing the end of the barrel. Fig. 2 represents a similar section with the pen projected and the cap on the rear end. Fig. 3 represents in plan view the end of the barrel with the pen projected.

Referring to the drawings, *a* represents the pen-barrel, and *b* the stem or spindle. The rear end of the spindle projects beyond the barrel and is threaded for attachment to the head or knob *b'*, by which it may be projected or retracted.

*c* indicates a sleeve which is fitted slidingly upon the rear end of the barrel and which is in threaded engagement with the head or knob *b'*, so as to cover the rear end of the spindle when the latter is retracted, as shown in Fig. 1. The rear end of the barrel is closed by a non-threaded washer *d*, bearing against a shoulder *a'* in the interior of the barrel, a sleeve *d'*, of cork treated with paraffin, and an exteriorly-threaded washer *d''*, screwed into the end of the barrel. The sleeve *d'* forms a packing which permits the stem *b* to slide without the escape of ink.

On the end of the stem *b* is secured the pen *e*, which is held in place by the sleeve *e'*. The conduits for supplying ink to the pen are shown at *e''*.

The bore or ink-receptacle *a''* in the barrel converges toward the front of the pen, there being a shoulder *a'''* at the end of the barrel, in which the sleeve *e'* tightly fits when the stem is projected, as shown in Fig. 2. The extremity of the barrel is interiorly beveled, as at *a''''*, and is provided with the external threads *a'''''*. It will be observed from Fig. 3

that the end of the barrel is externally tapered, so that it may be grasped by the fingers immediately in the rear of the threads *a'''''*.

The cap is shown at *f* and is adapted to fit either upon the head *b'* of the stem or upon the end of the barrel, as shown in Fig. 1. For this purpose it is provided near its closed end *f'* with internal threads *f''* to engage with the threads *a'''''*. There is also driven into the end of the cap a plug or valve *f'''*, which is beveled complementally to the bevel *a''''* on the barrel. The end of the plug is so related to the screw-threads *f''* that when the cap is screwed on the barrel the end walls of the barrel are tightly wedged between the plug and the screw-threads *f''*, so as to prevent the splitting of the barrel and to absolutely preclude the liability of ink escaping when the cap is on the pen. The said cap is provided with the elongated body *f''''*, which covers the tapering portion *a''''''* of the barrel. In the plug *f'''* is driven a pin *f''''*, which abuts against the end of the stem when the latter is retracted and the cap is placed upon the barrel and prevents the stem from being moved so as to injure the pen *e*.

Preferably the sleeve *c* and the cap *f* are of the same internal diameter, so that when the cap is placed upon the head *b'* of the stem one appears to be a continuation of the other, and the device thus presents a neat and attractive appearance.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. A fountain-pen comprising a barrel portion having a screw-thread at one end, the said end being beveled, a cap provided with a threaded portion, and a valve adapted to be driven within the cap, said valve being provided with a beveled portion, whereby when the cap is screwed into position upon the barrel the beveled faces of the barrel and the valve will form a tight joint.

2. A fountain-pen comprising a tapered barrel portion the end of which is beveled, the said beveled end being exteriorly threaded, a cap provided with an elongated body portion adapted to cover the said tapered

portion of the barrel and having also an interior-threaded portion, and a valve tightly seated within the said cap, the said valve having its front portion beveled, whereby  
5 when the cap is screwed into position upon the barrel portion, the beveled faces of the valve and barrel will form a tight joint.

3. A fountain-pen comprising a tapered barrel portion exteriorly threaded at one end  
10 and interiorly threaded at the other end, the end of the exteriorly-threaded portion being beveled, a sleeve adapted to slide upon said barrel, a knob having a threaded engagement with the sleeve, said knob having an opening through it which is partially threaded, a  
15 stem having engagement with the threaded portion of the knob, a cap having an exteriorly-threaded portion adapted to engage with the exteriorly-threaded portion of the

barrel, a valve tightly fitted within the said 20 cap at its inner portion, the said valve being provided with a beveled face, adapted to tightly contact with the beveled end of the barrel when the cap is screwed upon the barrel, a pin extending through said valve, the  
25 length of said pin being such that when the cap is placed upon the knob at the end of the barrel the pin will be extended within the knob-opening, and when the cap is placed upon the beveled end of the barrel the pin  
30 will abut against the said stem.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM F. CUSHMAN.

Witnesses:

M. B. MAY,  
GEORGE PEZZETTI.