R. E. DECKER.

FOUNTAIN PEN OR THE LIKE.

APPLICATION FILED AUG. 15, 1910.

1,003,437.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 1.

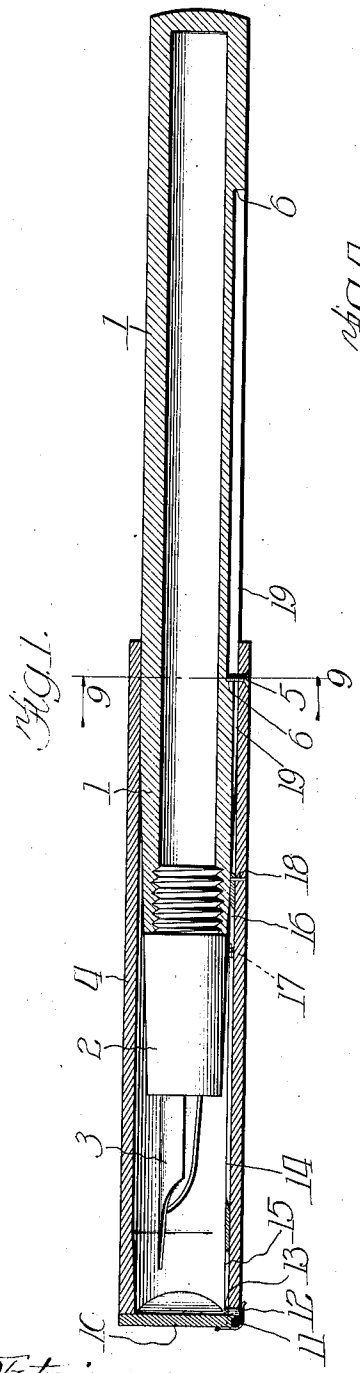

Fig. 1.

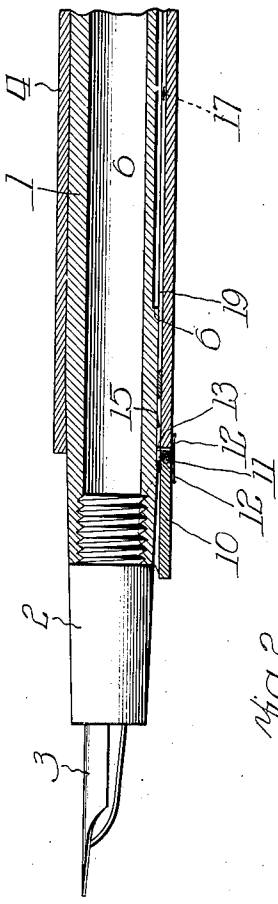

Fig. 4.

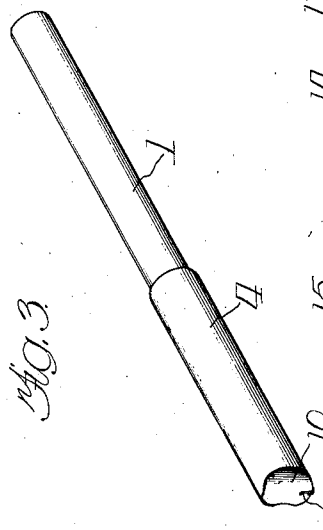

Fig. 3.

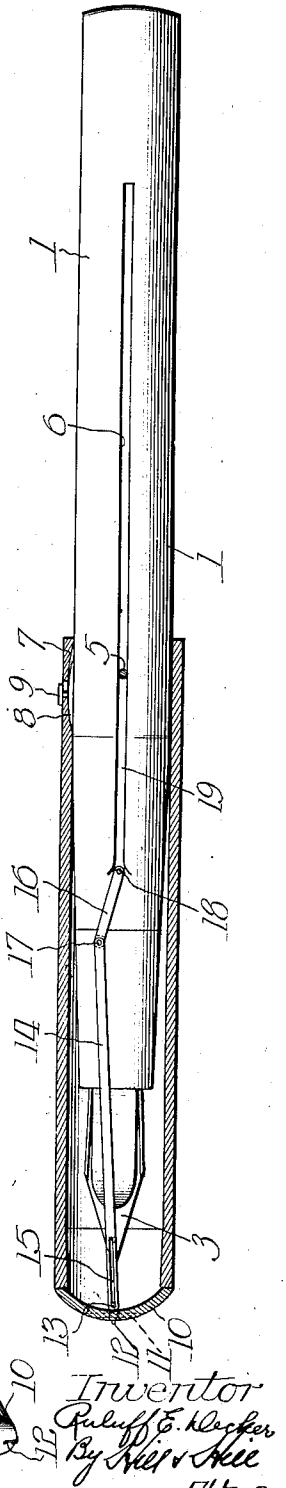

Fig. 2.

Witnesses:
Robert F. Weir
Charles I. Cobb

Inventor
Rudolf E. Decker
By Weir & Weir
Attys.

R. E. DECKER.

FOUNTAIN PEN OR THE LIKE.

APPLICATION FILED AUG. 15, 1910.

1,003,437.

Patented Sept. 19, 1911.

2 SHEETS—SHEET 2.

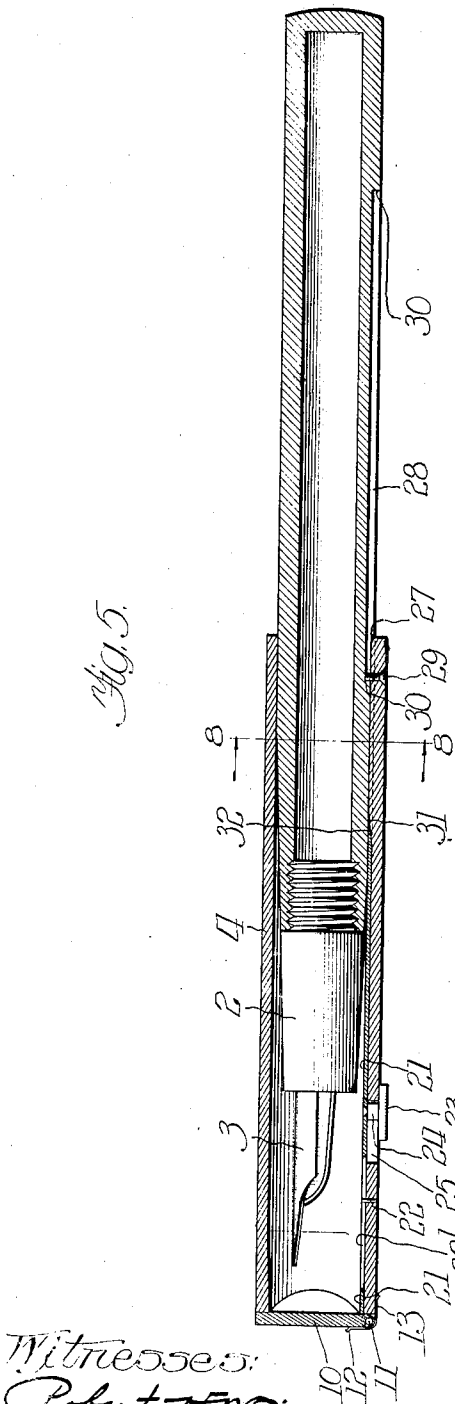

Fig. 5.

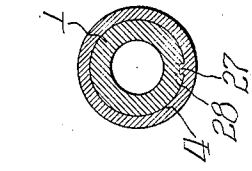

Fig. 8.

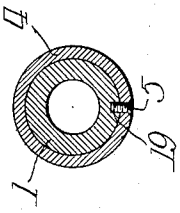

Fig. 9.

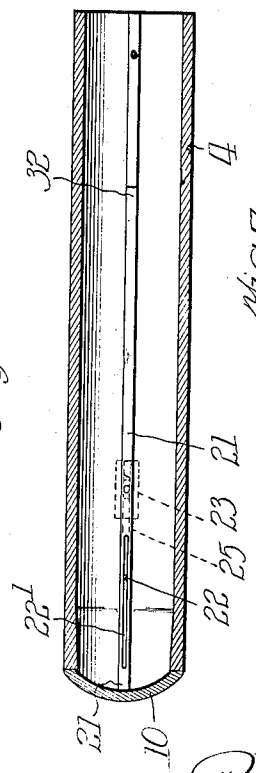

Fig. 6.

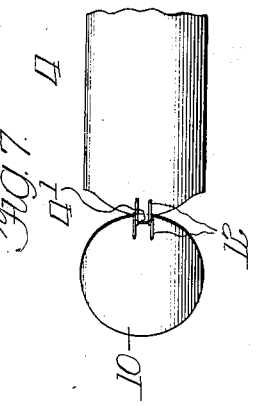

Fig. 7.

Witnesses:
Robert N. Weir
Charles I. Cobb

Inventor:
Rufus E. Decker
By Hill & Hill
Attys.

UNITED STATES PATENT OFFICE.

RULUFF E. DECKER, OF CASSOPOLIS, MICHIGAN.

FOUNTAIN-PEN OR THE LIKE.

1,003,437. Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed August 15, 1910. Serial No. 577,204.

To all whom it may concern:

Be it known that I, RULUFF E. DECKER, a citizen of the United States, residing at Cassopolis, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Fountain-Pens or the Like, of which the following is a description.

My invention belongs to that class of devices known as fountain pens or the like in which it is desired to protect or cover the pen or writing point when the same is not in use, and relates particularly to an improved form of protecting cap adapted to permit the uncovering or exposing of the writing instrument such as the pen or pencil point or the like without separating or removing the cap from the pen or pencil holder. With this construction it is impossible for the cap to become mislaid or lost or dropped and possibly injured.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the claims.

In the drawings in which like reference characters indicate like or corresponding parts, Figure 1 is a longitudinal sectional view of a fountain pen equipped with one form of cap, Fig. 2 is a sectional view of the cap and plan view of the holder including the means for opening the cap end, Fig. 3 is a perspective view of the pen with the cap in position to protect the writing point, Fig. 4 is a sectional view substantially similar to Fig. 1 with the cap in position to permit the use of the pen or writing point, Fig. 5 is a sectional view of a slightly modified construction, Fig. 6 is a sectional view of the cap shown in this construction, Fig. 7 is a view of a portion of the cap with the end open, Fig. 8 is a sectional view taken substantially on line 8—8 of Fig. 5, and Fig. 9 is a sectional view taken substantially on line 9—9 of Fig. 1.

Referring to the drawings, for illustration, I have shown a fountain pen holder or barrel 1 provided with the usual end 2 carrying the pen 3, it being of course understood as before mentioned, that any other writing instrument may be protected as hereafter described.

My preferred form of cap comprises a shell or body part 4 which is slidably mounted on the holder 1, the same being adapted to slide out as shown in Fig. 1 to cover or protect the writing point or to be pushed back along the barrel as shown in Fig. 4 to expose or uncover the writing point. The bore of the shell or cap 4 is preferably the same diameter and similar in contour to the exterior of the holder 1, a round or cylindrical holder being shown. The cap 4 may be prevented from rotating about the holder 1 or from being pulled off of the holder by means of a slot and pin connection comprising a slot 19 in the barrel and a pin 5 in the cap, or by equivalent means for the purpose. Longitudinal movement of the two relative to each other is limited by the shoulders 6 coöperating with the pin 5.

If desired, means may be provided for locking the cap and holder relative to each other, a very simple construction being shown in Fig. 2 in which the cap is provided with a cam groove 7 in which is positioned a locking member 8 provided with an extension 9 extending without the cap so that as the cap is at one end or the other of its travel the end 8 may be forced to one end or the other of the cam groove 7 thereby frictionally locking the cap in position.

To prevent dust from settling within the cap when the same is in position to cover the writing point I preferably provide a part or door 10 on the end of the cap, the same being shown pivotally secured to the cap 4 by a pin 11 or its equivalent. As most clearly shown in Fig. 7, the cap 4 is extended as at 4^1 to form a hinge with the end 10. The door 10 is provided with resilient members 12 which tend to normally maintain the door 10 in closed position when the writing point is not exposed, suitable means being provided for opening the door before the cap is removed to expose the point. The door is formed so that it will fit the pen barrel when open, that is, in the case of a cylindrical pen holder, as shown the door is formed as a part of a cylindrical surface so that it will lie substantially as shown in Fig. 4 when the pen is in use. It is understood of course that where the pen holder is of a different shape the cap and door would be made to correspond.

In Figs. 1 to 4 I show means arranged to coöperate with the holder 1 so that the door will be automatically operated when the cap is moved to the position shown in Fig. 4 so that the point of the pen or writing

point will not be injured by coming in contact with the door. In Figs. 5, 6 and 8 the door operating means must be operated before the cap is pushed along the holder, the construction being preferably so that the cap will be locked in position until the door is opened, as will be more fully described hereafter.

Referring to the automatic arrangement shown in Figs. 1 to 4, 14 is a small bar preferably provided with a slot 15 arranged to coöperate with the pin 13 at one end and pivotally secured by a pin 17 to a bar 16 at the opposite end, which bar 16 is pivotally secured by a pin 18 or its equivalent to the cap. In Fig. 2 a portion of the cap is removed to show the construction, it being understood that the pins 13 and 18 are carried by the removed part of the cap. The bars 14 and 16 are arranged to coöperate with the slot 19 in the pen holder which is extended as most clearly shown in Figs. 1 and 2, two bars being normally in the position shown in Fig. 2 when the pen cap is as shown in Figs. 1 and 2. When the cap is moved along the pen holder the bars 14 and 16 are straightened out and slide in the groove 19, but one end of 16 being pivotally secured to the cap the opposite end of 17 is pushed out against the door 10, thereby forcing the same open against the springs 12 thereby retaining it open as shown in Fig. 4, so that continued moving of the cap exposes the pen point 3. When the cap 4 is moved back to cover the pen 3 the resilient members 12 force the door back as soon as the bars 14 and 16 are out of the slot 19. It should be noted that the bars 14, 16 are very slightly curved or bowed to allow their being forced into the position shown in Fig. 2.

In the form of device shown in Figs. 5 and 6, the door 10 is opened by means of a sliding bar 21 which is provided with a part 24—23 extending without the cap for operating the same, one end of the bar 21 being guided by the pin 22 coöperating with a slot 22^1 in the bar. Any suitable means may be provided for preventing the sliding of the cap until the door has been opened, a very simple construction being shown. Referring particularly to Fig. 5, I extend the end of the bar 21 and taper the same as at 32, the cap being provided with a cam surface 31. When the member 21 is forced back to permit the door to close after the cap has been moved to cover the pen the tapered end 32 and the cam face 31 force the bar against the holder 1, thereby frictionally locking the cap in position. In this case it is impossible to slide the cap back to uncover the writing point until the door has been opened by moving the thumb piece 23, which at the same time unlocks the cap. To prevent separation of the cap and holder, or rotation of the two relative to each other, I provide a slot 28 in one part, as shown the holder 1, arranged to be engaged by the pin 29 on the opposite part or as shown on the cap. This construction is substantially similar to that shown in the other figures. If desired, a fin or extension 27 may be provided on the cap which will also engage the holder in the slot 28, the fin 27 or the pin 29 engaging one of the shoulders 30 at the end of the travel of the cap.

It is obvious that the cap may be applied to any form of pen holder or other writing instrument with slight modifications, and in the claims where I specify a pen, pen holder or fountain pen, I wish to be understood as indicating any form of writing instrument to which the cap is applicable.

Having thus described my invention it is obvious that various immaterial modifications may be made in the same within the scope of the appended claims without departing from the spirit of my invention, hence I do not wish to be understood as limiting myself to the exact construction, arrangement or combination of parts herein shown and described or uses mentioned.

What I claim as new, and desire to secure by Letters Patent is:

1. A fountain pen cap comprising a shell open at its end and provided with a part pivotally secured thereto at one end and arranged to close the same when desired, and movable means mounted on the cap and adapted in its movement to engage said part to open the same.

2. A fountain pen cap open at its ends and provided at one end with a part hinged thereto, means tending to normally maintain said hinged part in closed position and movable means carried by the cap for opening said part when desired.

3. A device of the kind described, comprising a pen holder and a cap slidably secured thereto, said cap open at its outward end and provided with a door pivotally secured thereto, resilient means tending to normally maintain said door in closed position and means interposed between said holder and cap for opening said door when the cap is slidably moved along the pen holder to expose the pen point.

4. A device of the kind described, comprising a pen holder and a cap slidably secured thereto, said cap open at its outward end and provided with a door pivotally secured thereto, resilient means tending to normally maintain said door in closed position and a longitudinally movable bar cooperating with the pen holder for opening said door when the cap is slidably moved along the pen holder to expose the pen point.

5. A device of the kind described comprising a pen holder, a cap slidably secured thereto and arranged to inclose or expose

the writing point, means for preventing rotation of the cap about the holder and means for limiting the sliding movement of said parts relative to each other, said cap provided with a door pivotally secured thereto, means for automatically closing said door and means independent of the cap and holder for coöperating with the holder for opening the door.

6. A device of the kind described comprising a pen holder, a cap slidably secured thereto and arranged to inclose or expose the writing point, means for preventing rotation of the cap about the holder and means for limiting the sliding movement of said parts relative to each other, said cap provided with a door pivotally secured thereto, means for automatically closing said door and movable means connected to the cap and coöperating with the holder for opening said door.

7. A device of the kind described comprising a pen holder, a cap slidably secured thereto and arranged to inclose or expose the writing point, means for preventing rotation of the cap about the holder and means for limiting the sliding movement of said parts relative to each other, said cap provided with a door pivotally secured thereto, means for automatically closing said door, means carried by the cap and coöperating with the holder for opening said door, and means for locking said cap against movement relative to said holder.

8. A device of the kind described comprising a pen holder, a cap slidably secured thereto and arranged to inclose or expose the writing point, means for preventing rotation of the cap about the holder and means for limiting the sliding movement of said parts relative to each other, said cap provided with a door pivotally secured thereto, and means for automatically opening said door including an elongated arm having a movable connection with the holder and cap respectively.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

RULUFF E. DECKER.

Witnesses:
CHESTER E. CONE,
ROBERT J. ANDERSON.