

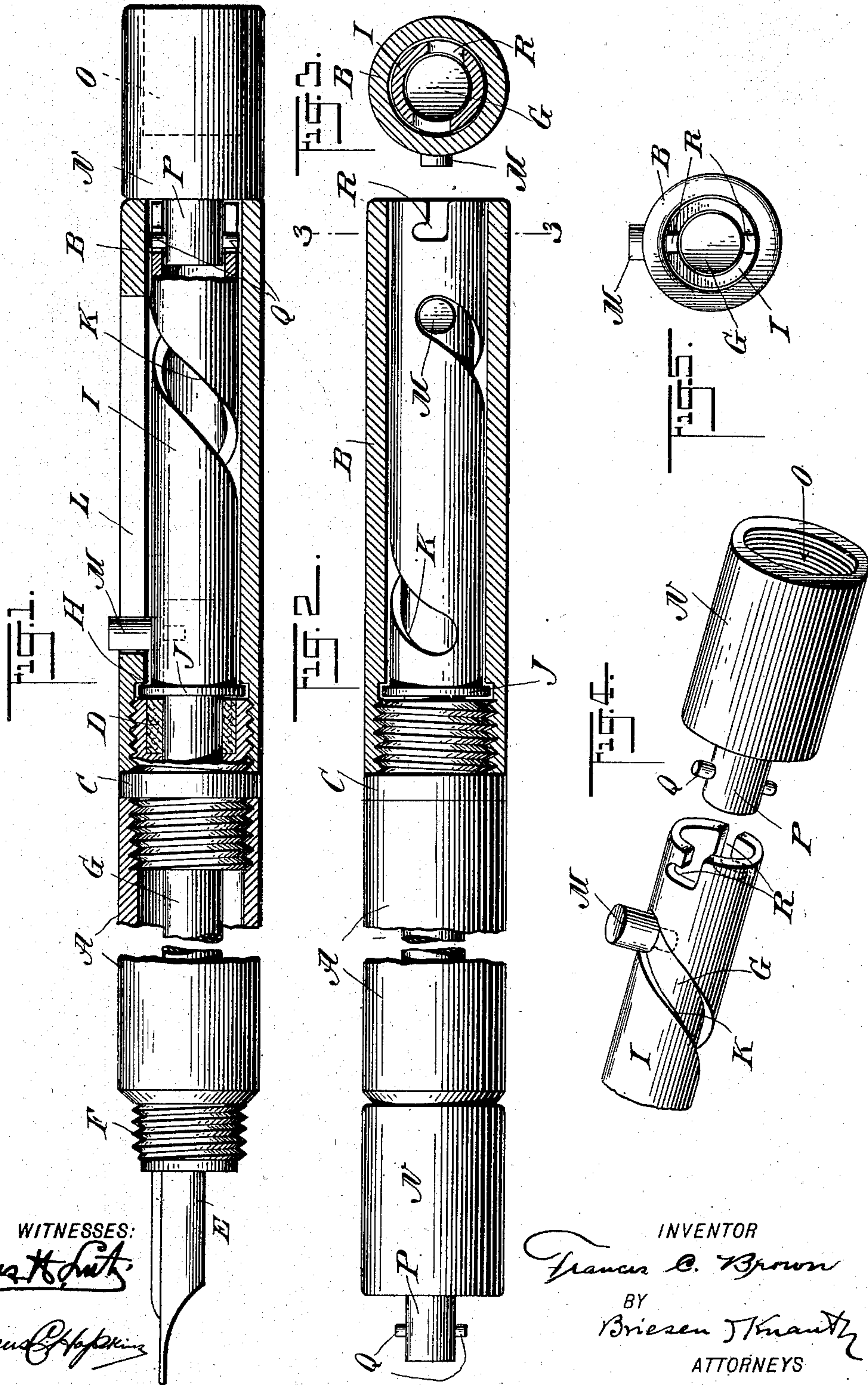
No. 750,430.

PATENTED JAN. 26, 1904.

F. C. BROWN.
FOUNTAIN PEN.

APPLICATION FILED AUG. 19, 1903.

NO MODEL.



WITNESSES:

Julius H. Smith
Marcus G. Hopkins

INVENTOR

Francis C. Brown

BY

Briesen & Knauth

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS C. BROWN, OF NEW YORK, N. Y.

FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 750,430, dated January 26, 1904.

Application filed August 19, 1903. Serial No. 169,972. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. BROWN, a citizen of the United States, and a resident of New Brighton, borough and county of Richmond, city and State of New York, have invented certain new and useful Improvements in Fountain-Pens, of which the following is a specification.

My invention relates to fountain-pens, and particularly to novel features of construction therein providing means for the longitudinal movement of the point relatively to the case, the disposition of the operating mechanism and ink-receptacle, the coöperation of the cap with the case and operating mechanisms, and other features of construction hereinafter described, and particularly set forth in the annexed claims.

Some of the objects of my invention are to provide a novel and useful disposition of the ink-receptacle and the operating mechanism and to provide an improved form of cap serving as a closure and coöperating with the operating mechanism in a novel and peculiarly useful manner.

The invention will be fully described hereinafter in connection with the drawings, in which like reference characters designate like parts throughout the several views.

In the drawings I have illustrated one form of pen embodying my invention by the following figures:

Figure 1 is a side view of my improved pen with parts in longitudinal section and showing said parts in operative position for writing and actuating the operating mechanism. Fig. 2 is a top view of my improved pen with parts in longitudinal section and showing the cap in place as a closure and the point drawn in. Fig. 3 is a cross-section on line 3 3 of Fig. 2. Fig. 4 is a detail in perspective of an end portion of the spirally-slotted barrel and the cap about to be applied thereto, and Fig. 5 is a rear end view of my improved pen.

Referring to the drawings, the casing of the pen consists of a hollow section A, which has an internal thread at one end, a hollow section B, which also has an internal thread at one end, and a connector C, which has a cen-

tral portion or collar of equal diameter with the sections A and B and threaded ends adapted to screw into the internal threads in the sections A and B and connect the same.

A hole is provided through the connector C concentric with its periphery and that of the sections A and B. The said hole through the connector is enlarged at one end to form an annular space for the reception of a ring D, of packing material, such as cork or rubber.

The forward end of the section A is provided with a constricted opening in which fits the nib E and has an external thread F.

The nib E is fast on a rod G, which passes through the interior of section A, through the hole in the connector C, and projects into the interior of the section B.

The chamber within the section A is adapted to hold ink, which is fed therefrom by the nib E in the usual manner. The hole in the connector C fits the rod G snugly, admitting, however, of the longitudinal movement of said rod G to move the nib into and project it from the casing, thereby preventing to a great extent the leakage of ink through the hole in the connector C around the rod G.

The packing-ring D is provided in the connector C to insure against the leakage of ink therethrough, and while it may be placed in either end of said connector it is preferable to place it in that end away from the ink, as the fit of rod G in the hole prevents the passage of the greater part of the ink and only a slight leakage would come into contact with the packing, while if the packing were placed in that end of the connector next the ink chamber or receptacle it might become soaked and deteriorate.

The internal diameter of that end of section B which is internally threaded is greater than that of the major portion of said section B, a shoulder H being formed a short distance in from the end of said internal thread.

A barrel I, having a flange J at one end, fits into the section B to be rotatable therein with its flange J abutting against the shoulder H and its unflanged end lying approximately flush with the unthreaded end of section B. When section B, containing the bar-

rel I, is screwed onto connector C, the end of connector C and shoulder H prevent any longitudinal movement of said barrel I.

The barrel I is provided with a spiral slot K throughout its central portion, as shown, and oppositely-disposed bayonet-slots R in its unflanged end.

The section B is provided with a straight longitudinal slot L.

A pin M of slightly less diameter than the width of slots L and K is passed through said slots and screwed into the end portion of the rod G, projecting slightly beyond the outside surface of the section B.

The pin M, engaging slot L, prevents rotation of the rod G and nib E, but permits of their longitudinal movement to project and retract the nib E from the case.

It will be seen that as the barrel I is restricted against longitudinal movement and as the pin M engages the slot K therein a rotation of the barrel I will cause pin M to travel in said slot K, imparting longitudinal movement to the rod G and nib E.

I provide a cap N, (shown in Figs. 1, 2, and 4,) which is substantially of the same diameter as the case and is provided with a cup-shaped recess O at one end, provided with an internal thread and a stud P at the other end slightly less in diameter than the internal diameter of the barrel I. The stud P of the cap N is provided with oppositely-disposed laterally-projecting pins Q, which are adapted to engage with the bayonet-slots R in the unflanged end of barrel I.

The operation of my improved pen is as follows: Ink is contained in the chamber formed in section A, is prevented from entering the working parts in section B, and is fed to the nib in the usual manner. When the pen is not in use, the cap N is applied to the nib end of the pen, the nib being previously withdrawn by screwing the recessed end of said cap N by means of its internal thread upon the thread F upon the forward end of section A. When the pen is desired to be brought into use, the cap N is unscrewed from the forward end of the section A and its stud P inserted in the exposed end of barrel I, the pins Q engaged with the bayonet-slots R in said barrel I, and the barrel I turned by means of the key thus formed by the cap N to project the nib from the case. It will be seen that when the pins Q engage the bayonet-slots R and are rotated therein to project the nib the cap N is prevented from being withdrawn from the pen without rotation in a reverse direction, but when the cap N is rotated to retract the nib and said rotation is completed it is in position to be withdrawn and immediately applied to the nib end.

I provide the pin M, projecting somewhat beyond the outside surface of the case, so that an auxiliary shield in the form of a tube

provided with a bayonet-slot for the reception of said pin M may be applied. Such an auxiliary shield is for temporary use only when the nib is desired to be protected for temporary placing in the pocket and it is not wished to take off the cap N as a key and affix it as a closure.

It is obvious that various changes may be made in the details of construction of my improved device without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. A cap for a fountain-pen provided with a key at its closed end, in combination with a penholder provided with rotary operative mechanism adapted to receive and be rotated by said key.

2. A cap for a fountain-pen provided with a key at its closed end, in combination with a penholder provided at its rear end with a recess for receiving said key.

3. A cap for a fountain-pen provided at its closed end with a longitudinally-projecting stud and a lateral projection on said stud, in combination with a penholder provided at its rear end with a receptacle for said stud and a bayonet-slot for the reception of said lateral projection.

4. A closure for a fountain-pen, provided with a thread at one end and an external key at its other end, in combination with a penholder having a complementing thread at one end and mechanism to be engaged with and operated by said key at its other end.

5. A fountain-pen provided with rotatable mechanism for projecting and retracting the nib, and a removable cap provided with a key arranged for engagement with said mechanism.

6. A fountain-pen provided with rotatable mechanism for projecting and retracting the nib, said mechanism comprising a head located at the rear end of the holder and provided with a recess, and a cap detachable from the forward end of the holder and provided with a key adapted to fit said recess of the said head.

7. A fountain-pen comprising a case made in two sections, the forward one of which is adapted to contain ink, a nib-projecting mechanism contained in the rear section, and a connector engaging both sections and having a collar located between the adjacent end surfaces of the two sections.

8. A fountain-pen comprising a case having an ink-receptacle, a nib projectable from and retractable into said case, a chamber in said case separate from said ink-receptacle, operating mechanism for said nib located within said chamber and a cap adapted to close the nib end of said case and having an external key adapted to engage and operate said operating mechanism when the cap is applied in a reversed position to the rear end of said case.

9. A fountain-pen comprising a case having an ink-receptacle in its forward portion, a nib operatively mounted in the forward end of said case, a chamber in the rearward portion of said case separate from said ink-receptacle, rotary operating mechanism in said chamber operatively connected through said ink-receptacle with said nib to project said nib from and retract the same into said case and a closure for the forward end of said case having a key adapted to engage and rotate said operating mechanism when applied to the rearward end of said case.

10. In a fountain-pen, a case comprising two chambers separated by a partition, a nib mounted for longitudinal movement in the forward end of the forward of said chambers, a rod connected with said nib, passing through a packed aperture in said partition and projecting into the rearward of said chambers, a barrel having a spiral slot mounted to rotate in said rearward chamber and restricted against longitudinal movement therein, a longitudinal slot in the wall of said rearward chamber, a pin projecting laterally from said rod through said spiral slot in said barrel and into said longitudinal slot in said wall and a

closure for the forward end of said case having a key portion adapted to engage and rotate said barrel when applied to the rear end of said case.

11. In a fountain-pen, a case comprising two chambers having a partition therebetween, a nib mounted in the forward end of the forward of said chambers and projectable from and retractable into said chamber, a rod connected to said nib, passing through said partition and projecting into said rearward chamber, a longitudinal slot in the wall of said rearward chamber, a pin fast to said rod and projecting laterally into said longitudinal slot, rotative operating mechanism in said rearward chamber for moving said rod longitudinally and a closure for the forward end of said case having a key adapted to engage and operate said operating mechanism when applied to the rearward end of said case.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS C. BROWN.

Witnesses:

EUGENE EBLE,
MARCUS C. HOPKINS.