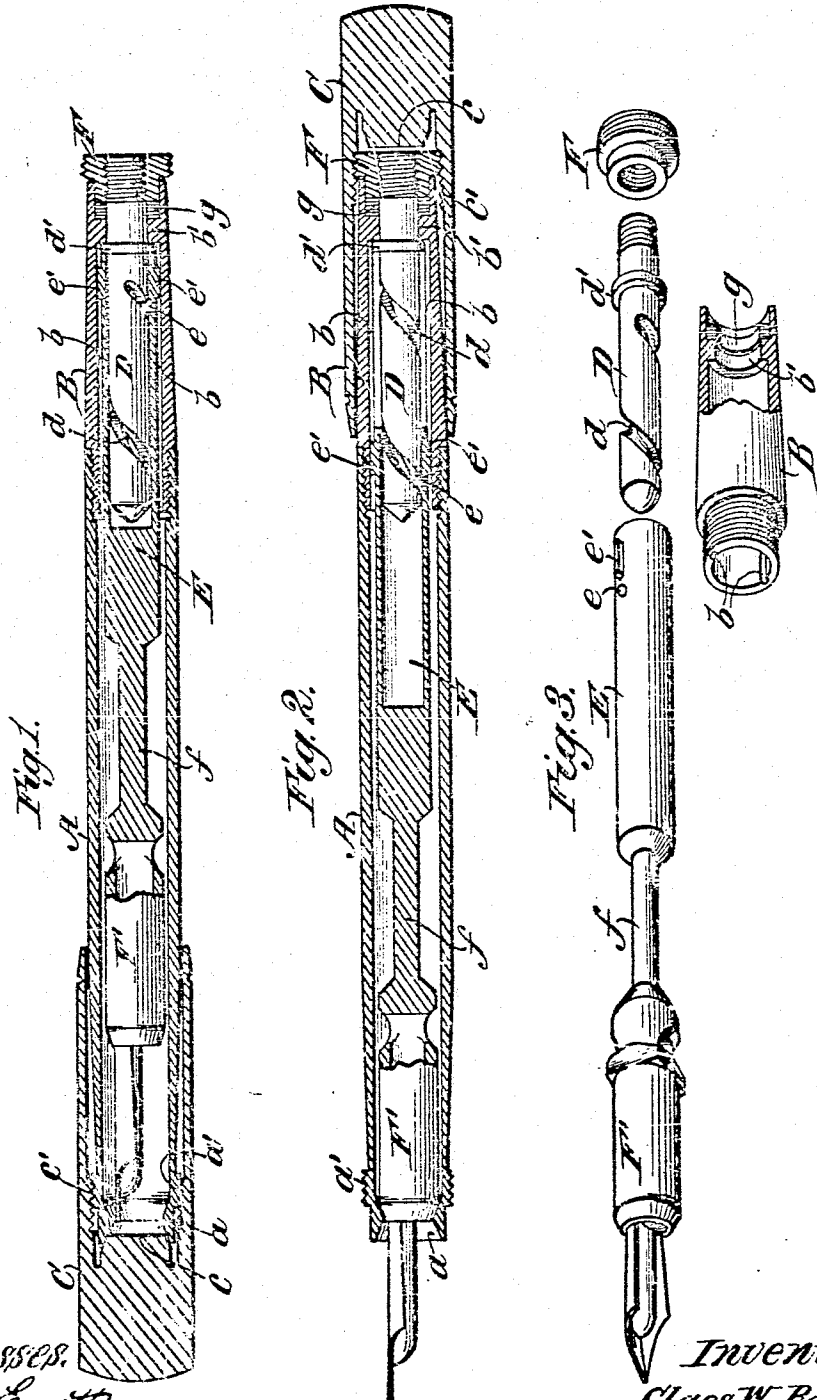


C. W. BOMAN.
 FOUNTAIN PEN.
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954,415.

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Witnesses:
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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

954,415.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLAES W. BOMAN, of the city, county, and State of New York, have invented a new and useful Improvement in Fountain-Pens, of which the following is a specification.

My invention relates to that class of fountain pens in which the nib-carrying bar is movable in, and lengthwise of, the tubular case or handle, so that it may be projected from and retracted within the case; and is combined with a hand-actuated "movement"—usually of the pro- and re-pelling kind—whereby it may be thus moved.

It is the object of my invention to produce an efficient, strong and durable fountain pen of this kind, having a "movement" fairly well housed within the removable section of the handle in which it is held, and having its parts so combined as to be conveniently fitted together and applied to the handle section, together with which they, as a whole, may be fitted to or removed from the main portion of the handle.

I will first describe my improvement in connection with the accompanying drawings forming part of this specification, and will then more particularly point out in the claim those features which I believe to be new and of my own invention.

In said drawings—Figure 1 is an axial section of a fountain pen embodying my invention in its preferred form, the parts being in the position which they occupy when the pen is retracted, and the nozzle end of the handle is closed by the cap. Fig. 2 is a like section with the parts in the position they assume when the pen is protruded in position for writing, and the cap is upon the rear end of the handle. Fig. 3 is a perspective view of the "movement," its operating knob or head, and the rear handle-section, these parts being detached from one another, and the extreme rear end of the handle-section being broken away to show the packing arrangement within.

A is the main or body portion of the handle, provided with the usual contracted nozzle having a flaring end *a* and an external screw thread *a'*.

B is the rear handle-section, which carries the "movement," provided with an externally screw threaded front end to screw into the correspondingly internally screw threaded rear end of the handle body A.

C is the cap, provided with a plug or stopper *c*, which closes the nozzle end of the handle, when the cap is applied to that end, and which also is provided with an internal screw thread *c'* to engage either the threaded part *a'* of the nozzle (when the cap is applied to that end, as seen in Fig. 1), or the threaded knob or head F (hereinafter more fully described) of the "movement," when applied to the other end of the handle, as seen in Fig. 2.

Thus far there is nothing essentially new in the pen.

D is the screw rod, and E is the rod-in-closing barrel, of the "movement." The said rod has the external screw-thread, shown at *d*; and the barrel has an internally projecting pin *a* to enter and engage the thread in the rod, as usual in a pro- and re-pelling movement of this general kind.

Only one pin *e* is shown in the drawing, but, as usual in this kind of a pen, two can be employed if preferred.

The front end of the barrel is closed, and to it is fixed the stem *f* of the nib carrying bar F'.

I prefer to make all of the parts D, E, F, *f*, of vulcanite or hard rubber. The screw thread *d* is cut into the body of the cylindrical rod D, which latter fits, and can move smoothly, in the barrel E.

The barrel E, which is cylindrical, fits and can move smoothly in the rear handle section B. It is provided upon its exterior and near its rear end, with two diametrically opposite longitudinal narrow and short ribs *e'* which enter corresponding internal longitudinal grooves *b* formed in the handle section B.

When the parts are in position in the handle, rotary movement of the screw D will cause longitudinal movement of the barrel E and parts carried by the same, as will be understood without further explanation.

Upon the shank of the rod D, back of the screw thread *d*, is an annular flange *d'*, which brings up against an annular shoulder *b'* in the rear part of the handle section B. The shank of the screw rod projects to the rear beyond this shoulder *b'*, through the handle section and has a screw threaded rear end on which is screwed, and fastened tightly, the externally screw threaded plug, or operating head, F. The annular space within the handle section B around the rear

portion of the shank of the screw, is fitted with annular washers or packing rings *g* of cork or other suitable material, which, when the plug *F* is screwed home, will be compressed between the shoulder *b'* and the plug *F*, and around the screw shank, so as to form an ink tight joint at the rear end of the handle, while permitting the free revolution of the screw rod *D*. Under this arrangement it will be noted that the screw *D* is in effect housed in a barrel closed at every point except the rear, and that the barrel in turn is housed in the handle section *B*, from which only its closed front portion at any time protrudes. This arrangement is simple, effective to prevent clogging of the movement, and has much structural strength.

When the cap *C* is screwed onto the plug *F*, as in Fig. 2, it can of course be used to rotate the plug, as customary in fountain pens of this general kind.

The ink feeder, nib carrying bar etc. which have to do with the writing instrumentalities proper, may be of any suitable known construction; they form no part of my present invention.

Having described my improvement and the best way now known to me of carrying

the same into effect, I state in conclusion that I do not limit myself narrowly to the specific structural details hereinbefore set forth since manifestly they can be varied in some particulars without departure from my invention; but

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

In combination with the main body of the handle, the rear handle section detachably connected therewith, a cylindrical barrel with closed sides and front end fitting and housed in the rear handle section, and capable of longitudinal movement only therein, a nib-carrying bar attached to the closed front end of the barrel, a screw rod fitting and housed in the barrel and swiveled in the rear handle section so as to be capable of rotary motion only therein, and a pin in the barrel which engages the screw thread in said rod, substantially as and for the purposes hereinbefore set forth.

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

CLAES WILLIAM BOMAN.

Witnesses:

OSCAR B. ANDERSON,
ERIC SJOBERG, Jr.