



# UNITED STATES PATENT OFFICE.

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## FOUNTAIN-PEN.

SPECIFICATION forming part of Letters Patent No. 785,654, dated March 21, 1905.

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*To all whom it may concern:*

Be it known that I, CLAES WILLIAM BOMAN, a citizen of the United States, and a resident of New York city, in the 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 what are styled "self-filling" fountain-pens, and more particularly to that kind of such pens in which a laterally-movable presser located within the handle and interposed between the handle and the collapsible ink-bag contained therein is combined with a movable operating-cap mounted on the exterior of the handle and connections between said cap and presser whereby the movement of the cap in one direction or the other, as the case may be, shall cause the presser to move laterally in a direction to squeeze the walls of the ink-bag together. My present application is directed to a form of pen of this general kind in which the operating-cap has a rotary movement.

The nature of my improvement and the manner in which the same is or may be carried into effect will be understood by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal elevation, partly in section, of a fountain-pen embodying my improvement, the parts being in the position they occupy when the ink-bag is uncompressed. Fig. 2 is a like view of the pen with the parts in the position they occupy when the ink-bag is compressed. Fig. 3 is a perspective view of the presser, the operating-cap and connections, and plug in which the same are mounted detached from the pen.

A is the usual tubular handle of hard rubber or other suitable material, having at its open front end the tubular nozzle B, constituting the pen-tip and containing the feed-bar C and the pen D. Within the handle is a collapsible ink-bag E, made, preferably, of vulcanized soft rubber, having its open front end fitted on the rear end of nozzle B. Ink from the bag passes through the nozzle to the feed-bar and thence to the pen. Thus far there is nothing new in the device.

The rear end of the handle is closed by a

plug F, secured tightly thereto by a friction-joint or otherwise. In the plug is formed an axial bore through which passes the stem or plunger G, which is capable of rotary movement in the plug and is surmounted by the external operating head or cap H. The inner end of the rotary stem or plunger is formed as a crank *g*, upon the end of which crank is swiveled at *g*<sup>2</sup> a connecting-link *h*, the other end of which is loosely jointed to the presser I, in this instance by a T-head *h*<sup>1</sup>, which passes through and loosely engages a slot *h*<sup>2</sup> in the presser.

Within the handle and secured therein so as to be capable of lateral movement is the presser I, consisting in this instance of a single long slim finger, preferably of spring metal, which is interposed between the ink-bag E and the handle A and extends lengthwise of the same. The presser has a head *i*, having a flange *i*<sup>1</sup>, which enters and loosely engages a cross-slot *j* in the plug, and a shank *i*<sup>2</sup>, which is received in a recess *j*<sup>1</sup> in the exterior of the plug.

It is preferred to provide means for locking the operating cap or head H against accidental rotary movement, although such means are not indispensable. One simple and effective arrangement for the purpose is illustrated in the drawings. The stem G is capable of slight lengthwise movement in the plug and on its inner end is armed with a spiral spring *s*, which tends to draw it in a direction to hold its head H down upon the plug F. On the outer portion of the stem, just under the cap, is a laterally-projecting pin *l*, which when the parts are in normal position, as in Fig. 1, enters a groove *l*<sup>1</sup> in the outer face of the plug, thus locking the head to the plug against rotary movement. By pulling out the stem slightly the pin will be disengaged from the groove and the operating-cap will be free to rotate.

The operating-cap in Fig. 2 is represented as having been rotated about one hundred and eighty degrees from the position shown in Fig. 1. In Fig. 1 the crank *g* is turned toward the presser and the ink-bag is uncompressed. The rotation of the cap to the posi-

tion shown in Fig. 2 has turned the crank away from the presser, with the effect of drawing the presser laterally in a direction to compress the ink-bag. When the cap is turned back to normal, the ink-bag will be released and free to expand.

Having described my improvement and the best way now known to me of carrying the same into practical effect, I state in conclusion that I do not limit myself narrowly to the structural details hereinbefore set forth in illustration of the invention; but

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

1. In a fountain-pen, the combination with the tubular handle and the collapsible ink-bag therein, of a laterally-movable presser interposed between the collapsible reservoir and the handle, a rotatable operating-cap mounted on the exterior of the handle and connections between the presser and the rotatable operating-cap whereby the rotation of the cap shall

cause the lateral movement of the presser in a direction to squeeze the walls of the ink-bag together or toward each other, substantially as hereinbefore set forth.

2. In a fountain-pen, the combination with the tubular handle and the collapsible ink-bag therein, of a laterally-movable presser interposed between the handle and the ink-bag, a rotatable operating-cap mounted on the exterior of the handle, connections between the presser and the cap whereby the rotating movement of the cap shall effect the lateral movement of the presser, and means for automatically locking the cap in normal position, 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:

SAMUEL KRAUS,  
OSCAR ANDERSON.