

UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

1,262,438.

Specification of Letters Patent.

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To all whom it may concern:

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

My invention relates to self-filling fountain pens of the kind wherein the handle end of the pivoted lever for operating the presser bar protrudes through the rear end of the pen handle as shown for example in U. S. patent to Eagle Pencil Company, assignee of Oscar B. Andersson No. 1,213,725 of January 23, 1917; and it consists of a novel construction and arrangement of means for covering and protecting the end of the operating handle when not in use.

The improvement will first be described in connection with the accompanying drawings forming a part of this specification, and will then be more particularly pointed out in the claims.

In the drawings—

Figure 1 is a longitudinal axial section, partly in elevation, of a fountain pen embodying my improvement in its preferred form, showing the parts of the self-filling movement in normal position, with the cap closed over the handle end of the operating lever.

Fig. 2 is a similar view of the same with the parts in the position they assume when the presser bar is forced inwardly to compress the ink bag, and with the cap turned back so as to expose the handle end of the operating lever.

Fig. 3 is a view of the self-filling movement detached.

Fig. 4 is a detached view of the plug.

Fig. 5 is a similar view of the spring which gives a snap action to the cap.

Fig. 6 is a similar view of the operating lever.

A is the usual pen handle with the usual nozzle which holds the feed bar and pen. B is the resilient, vulcanized, soft rubber ink bag having its mouth fitted on the rear end of the nozzle. C is the presser bar extending lengthwise of the ink bag between it and the handle, and pivoted at about its middle to the front end of the operating lever D pivoted between its two ends in a

recess or slot *e* in the plug E on a pivot pin *f* extending crosswise of the recess. The plug E is removably fitted into the rear end of the handle, and the recess or slot *e* extends from end to end of the plug and from one side of the plug diametrically across, and nearly to the opposite side, of the same, opening out through the dished rear end *i* of the plug in the form of a cross slot *g* to permit the necessary vibratory play to the rear of handle end *h* of the operating lever which protrudes through it. A spiral spring *k* located in the plug bears against the lever D, at a point in rear of the pivot *f*, in a direction to lift its presser bar end away from the ink bag.

To the rear end of the handle is hinged the cap F which can be swung on its hinge to cover or uncover the handle end *h* as desired. For this purpose it is provided with a tongue *a* which projects from the base of the cap on the prolongation of its side, and is adapted to enter and fit in a notch *b* in the rear end of the handle where it is held by a cross pin *c* which forms the pivot on which the cap can swing. The cap is arranged to act as a hinged snap-cap—that is to say a cap that will open and shut with a snap, and be held in either of those positions, like the blade of a knife. For this purpose the longitudinal open face of the slot or recess *e* in the plug E is in line with the tongue *a* of the cap, when the plug is fitted in its proper place in the rear end of the handle, so that that portion of the tongue which extends inwardly beyond the thickness of the shell of the pen handle may be received in the slot. And located in said slot is a longitudinal plate spring *d*, anchored in place by a terminal fin *d'* which is turned up at right angles to the body of the spring, bridging the slot *e*, and held in kerfs *e'* cut for its reception in the plug on opposite sides of the slot. The plate spring is in a position to bear against the heel of the tongue *a* of the cap so as to give it the necessary snap action in opening and closing. In the body of the plug, on opposite sides of the slot *e* at the point where the cap is pivoted to the pen handle, are grooves *a'* to permit the passage of the pivot pin *a*, which latter thus serves as means to fasten the plug E in its proper position in the end of the handle.

The cap is made hollow, so as to receive and accommodate the head of the handle end

of the operating lever, which projects a slight distance beyond the dished rear end of the handle, in order to permit it to be more readily manipulated; it is thoroughly protected and shielded by the snap cap F when the latter is shut, as shown in Fig. 1.

The tongue *a* may be made of hard vulcanized rubber in one piece with the cap, as shown in Fig. 1. But preferably it is made of metal separate from the cap, as shown in Fig. 2. In the construction shown in the figure last named the tongue, made of metal, is provided with a metal shank *a'* embedded or tightly seated in the side wall of the cap said shank being prolonged in the shape of a stem *a''* which penetrates and is tightly secured in the head of the cap, as shown in Fig. 2.

Having described my improvement and the best way known to me of carrying the same into practical effect, what I claim as new and of my own invention is as follows:

1. In a self-filling fountain pen of the character described, the combination with the pen barrel, the longitudinally slotted plug therein, and the pivoted operating lever mounted in said longitudinally slotted plug with its rear end protruding through a cross slot in the plug to provide an operating handle for the self-filling movement, of a cap for covering the handle end of the

operating lever, hinged to the rear end of the pen barrel at a point directly in register with the longitudinal slot in the plug, and formed with a heel that projects into the interior of the barrel and enters and fits between the walls of said slot, and a spring in said slot which engages the head of the cap and acts to hold it with yielding pressure in either open or closed position.

2. In a self-filling fountain pen of the character described, the combination with the pen barrel, the longitudinally slotted plug therein, and the pivoted operating lever mounted in the longitudinally slotted plug, and having its handle end projecting through a cross slot in the rear end of said plug, of a cap provided with a tongue which enters a notch in the rear end of the pen barrel that registers with the longitudinal slot in the plug within said barrel, a pin for pivotally securing the tongue in place in the said notch, said tongue being of such shape and dimensions that, when thus secured, it will extend inwardly beyond the shell of the pen barrel and into the longitudinal slot in the plug, and a spring in said slot secured to the plug and engaging the heel of the tongue so as to hold the cap in either open or closed position.

In testimony whereof I affix my signature.

CLAES WM. BOMAN.