DE WITT C. VAN VALER.

LEVER FILLER FOR FOUNTAIN PENS.

APPLICATION FILED DEC. 21, 1918.

1,328,215. Patented Jan. 13, 1920.

Fig. 1.

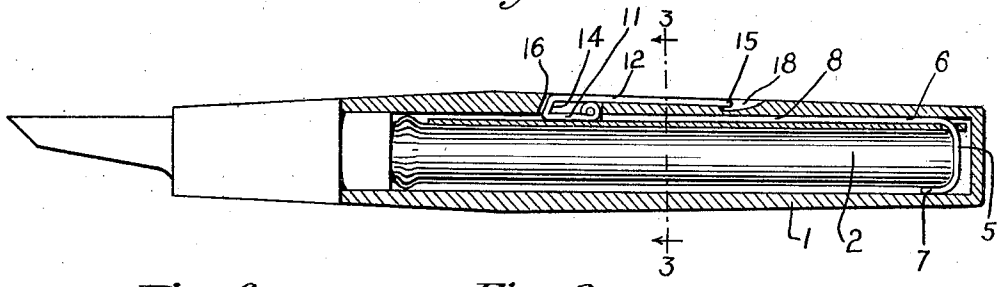


Fig. 6.

Fig. 2.

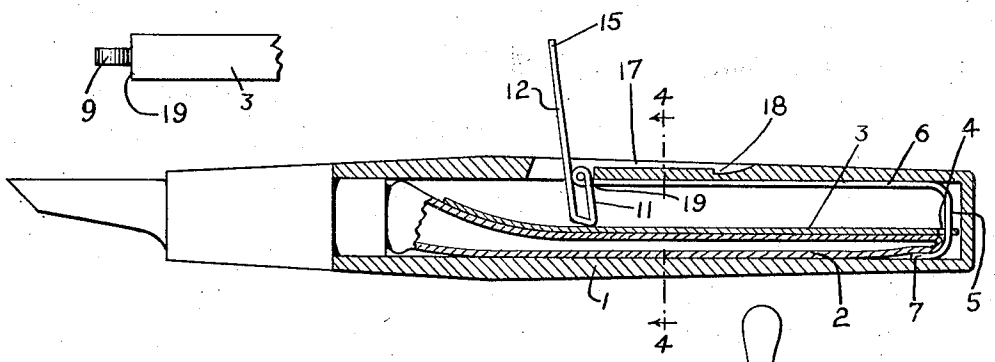


Fig. 3.

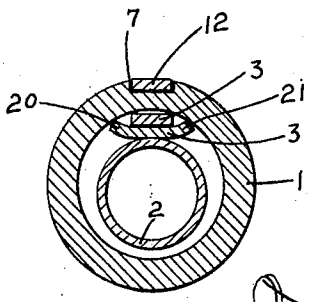


Fig. 4.

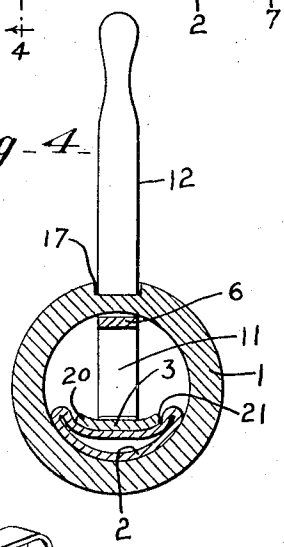
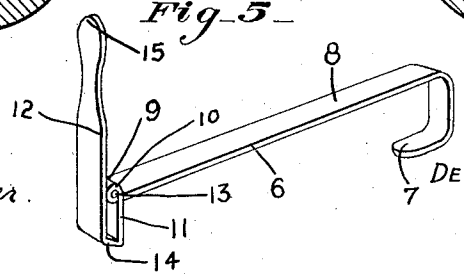


Fig. 5.



WITNESSES

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LEVER-FILLER FOR FOUNTAIN-PENS.

1,328,215. Specification of Letters Patent. Patented Jan. 13, 1920.

Application filed December 21, 1918. Serial No. 267,812.

To all whom it may concern:

Be it known that I, DE WITT C. VAN VALER, a citizen of the United States, and a resident of the city of New York, Richmond Hill, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Lever-Filler for Fountain-Pens, of which the following is a full, clear, and exact description.

This invention relates to fountain pen fillers and to what is commonly known as a lever filler, and has for an object the provision of an improved construction wherein the resiliency of the bag acts to hold normally the lever positively in a folded or unfolded position.

Another object in view is to provide a filler construction formed with a lever support positioned within the pen casing but not secured thereto, the support acting as a guide for the presser bar and as a support for the lever acting on the presser bar.

A further object of the invention is to provide a filler structure having a support with a bar hinged thereto and the parts so arranged that the hinge will be within the wall of the pen casing.

In the accompanying drawing:

Figure 1 is a longitudinal vertical section through the barrel of a fountain pen with an embodiment of the invention shown applied thereto.

Fig. 2 is a view similar to Fig. 1 with the parts shown in their operated position.

Fig. 3 is a section through Fig. 1 on line 3—3, the same being on an enlarged scale.

Fig. 4 is a section through Fig. 2 on line 4—4, the same being on an enlarged scale.

Fig. 5 is a detail perspective view showing the support and lever embodying certain features of the invention.

Fig. 6 is a detail fragmentary top plan view of the hinge end of the supporting member disclosing the arrangement of the shoulders.

Referring to the accompanying drawing by numerals, 1 indicates the barrel of an ordinary fountain pen, said barrel accommodating the sack 2 of rubber which is of usual construction and which is connected to any preferred form of feeding means for feeding ink when the pen is in use. Bag 2 is resilient and will automatically distend itself after having been collapsed in case it is released. This resilient action is necessary to cause the ink to be drawn into the bag after the same has been collapsed. In order to collapse the bag a presser bar 3 is provided which may be resilient if desired, though ordinarily it is comparatively stiff and is provided with quite a large aperture 4 through which the end 5 of the supporting element 6 extends. End 5 merges into a bottom or supporting foot 7 at one end and at the other end merges into a top piece 8 which is provided with a tongue 9 bent to extend entirely on one side of the top piece 8, and also bent to form one knuckle of the hinge. This knuckle coacts with knuckles 10 projecting from one side of the section 11 of lever 12. A pintle 13 extends through these knuckles for connecting them together and forming a hinge structure whereby the lever may be moved up and down as desired and the section 10 merges into an end section 14 which is at an angle to section 10, said angle being slightly more acute than a right angle whereby the upward distending action of the sack 2 against bar 3 will give a continuous tendency for the lever 12 to remain open or in an operated position as shown in Fig. 2. End 14 merges into a handle structure 15 which is preferably parallel with the section 11 whereby end 14 may be positioned in the notch 16 of casing 1 when the parts are in an inoperative or folded position as shown in Fig. 1, and the handle 15 arranged in the slot 17. An extra depression 18 is provided whereby anv one may easily engage the end of the handle 15 and raise the same. When the parts are in the position shown in Fig. 1 and it is desired to fill the sack 2, the end of handle 15 is grasped and the lever is swung to the position shown in Fig. 2. This movement causes a collapsing of the sack 2 as it moves the presser bar 3 away from the portion or section 8 of support 6. The bar 3 maintains a position substantially parallel to the casing 1 by reason of the fact that it is loosely guided by the end 15. It will be noted that by reason of the inclined end 14 and the shoulders 19 adjacent the knuckle 9 lever 12 is held in its operated or open position as shown in Fig. 2 by the resilient action of the sack 2. The shoulders 19 acting against section 11 limit the swinging movement of the lever 12 in one direction, when in the opposite direction it is limited by the casing 1 when fitting in the recess 17. The

lever therefore will remain positively closed or remain positively open under the resilient action of the sack. In forming the presser bar 3 the same may be flat, though ordinarily the edges 20 and 21 are bent upwardly or slightly rounded.

What I claim is:

1. The combination with a fountain pen barrel having a slot therein and a compressible sack in said barrel, a compressing device for said sack consisting of a presser bar having an opening at one end, a lever located within said slot for depressing said bar, and a supporting element arranged in said barrel and extending longitudinally thereof having a substantially hook-shaped end fitting into the opening in said presser bar for guiding the bar, and means for pivotally connecting said lever with said supporting element.

2. The combination with a fountain pen barrel having a slot therein, and a compressible sack in said barrel, of a compressing device for said sack consisting of a presser bar loosely positioned in said barrel and normally resting against said sack, a lever supporting element positioned in said barrel, but not connected thereto, said element having a hinged knuckle extending into said slot, a lever extending through said slot for moving said presser bar to collapse said sack, said lever having a hinged member, and a pintle extending through said knuckle and said hinged member for pivotally connecting said lever to said supporting element, the pivotal connection of said lever and said lever supporting element being always within said slot.

3. The combination with a fountain pen barrel having a slot therein a compressible sack within said barrel, a compressing device for said sack consisting of a presser bar, a support arranged in said barrel formed with an end for guiding said presser bar, and a lever arranged in said slot pivotally connected with said support, said lever having an inclined or chamfered end, and said support having a shoulder against which part of the lever engages when in an open position, whereby the resilient action of said sack will cause said lever to remain in an open or operated position until positively moved therefrom.

4. The combination with a fountain pen barrel having a slot therein, a compressible sack within said barrel, a compressing device for said sack consisting of a presser bar, a support arranged in said barrel formed with an end for guiding said presser bar, and a lever arranged in said slot pivotally connected with said support, said support having a shoudler against which part of the lever engages when in an open position, whereby the resilient action of said sack will cause said lever to remain in an open or operated position until positively moved therefrom.

5. The combination with a fountain pen barrel having a slot therein, a compressible sack within said barrel, a compressing device for said sack consisting of a presser bar having an opening adjacent one end, a support arranged in said barrel extending parallel with the barrel formed with a hook-shaped end extending through the opening in said bar for guiding said bar, and a lever arranged in said slot pivotally connected with said support, said lever having an inclined or chamfered end whereby the resilient action of said sack will cause said lever to remain in an open or operated position until positively moved therefrom.

6. The combination with a fountain pen barrel having a slot therein, a compressible sack within said barrel, a compressing device for said sack consisting of a presser bar, a support arranged in said barrel formed with an end for guiding said presser bar, and a lever arranged in said slot pivotally connected with said support adjacent the end which guides the presser bar, said lever having an end engaging said presser bar, and a bent back portion extending parallel with the main body, said bent back portion being pivotally connected with said support, said end of said lever acting on the presser bar for depressing the same when moved to an operated position, and releasing the presser bar when moved to a second position.

DE WITT C. VAN VALER.