

E. F. BRITTEN, JR.
 MOUNTING FOR PRESSER BAR ACTUATING LEVER FOR SELF FILLING FOUNTAIN PENS.
 APPLICATION FILED OCT. 9, 1916.

1,228,177.

Patented May 29, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

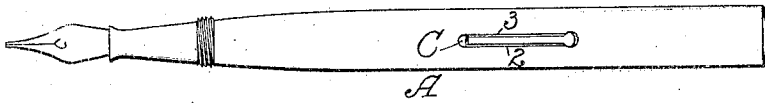


Fig. 2.

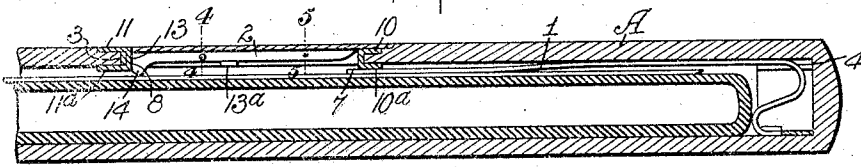


Fig. 3.

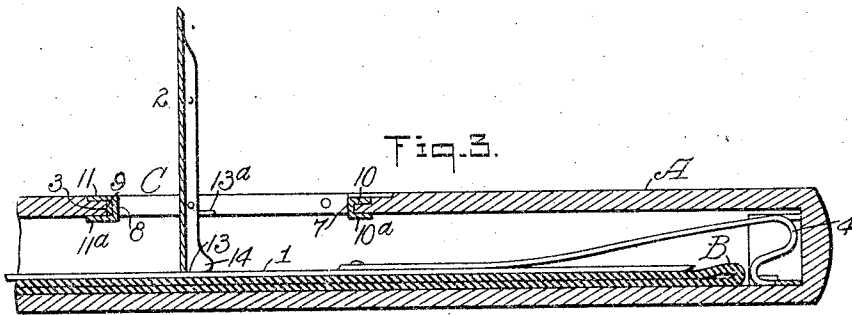


Fig. 6.

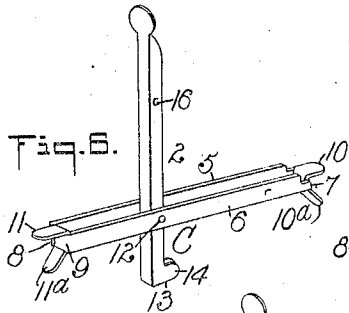


Fig. 2.

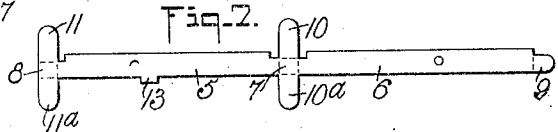


Fig. 10.



Fig. 9.

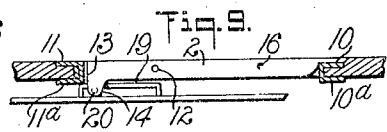
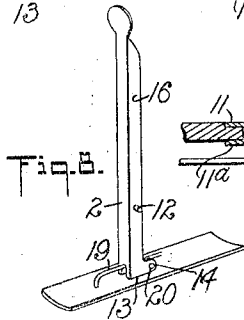


Fig. 8.



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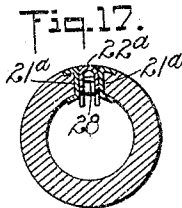
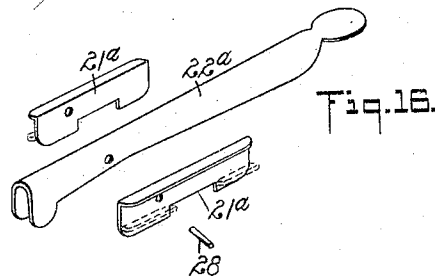
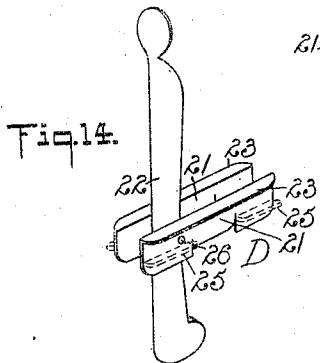
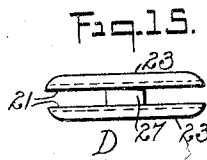
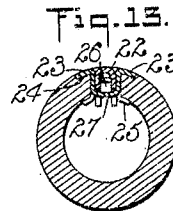
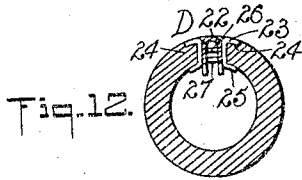
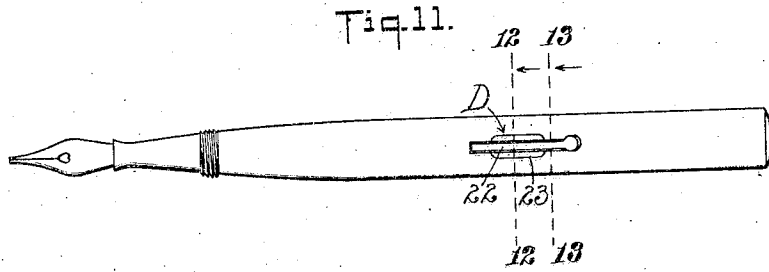
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UNITED STATES PATENT OFFICE.

EDWIN F. BRITTEN, JR., OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO L. E. WATERMAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

MOUNTING FOR PRESSER-BAR-ACTUATING LEVER FOR SELF-FILLING FOUNTAIN-PENS.

1,228,177.

Specification of Letters Patent.

Patented May 29, 1917.

Continuation of application Serial No. 40,625, filed July 19, 1915. This application filed October 9, 1916. Serial No. 124,616.

To all whom it may concern:

Be it known that I, EDWIN F. BRITTEN, Jr., a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Mounting for Presser-Bar-Actuating Lever for Self-Filling Fountain-Pens, of which the following is a full, clear, and exact description.

This application is a continuation of my application Serial No. 40,625, filed July 19, 1915.

This invention relates to fountain pens of the self-filling type, and deals more particularly with improvements in the means for actuating the presser bar for deflating the ink sack.

The invention has for its general objects to improve and simplify the mounting for the presser bar actuating lever whereby boring of the barrel of the pen for the reception of the fulcrum pin for the lever is avoided, the lever being fulcrumed in a box-like frame or member set into the lever-receiving slot of the pen barrel.

A further object of the invention is the provision of a novel form of mounting for the lever, which is punched from sheet metal and formed with lugs whereby the mounting is retained in position in the lever slot of the pen barrel.

Another object is to provide a stop means for limiting the throw of the lever in a direction to depress the presser bar.

The invention has as a further object the employment of a novel connecting means between the lever and presser bar whereby the restoring of the lever to normal position will positively raise the presser bar and thus cooperate with the spring of the presser bar to restore the latter to normal position.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawings, which illustrate certain embodiments of the inven-

tion, and wherein similar characters of reference indicate corresponding parts in all the views,

Figure 1 is a plan view of a fountain pen equipped with the invention;

Fig. 2 is an enlarged longitudinal section through a portion of the barrel of the fountain pen with the presser bar and its actuating lever in normal position;

Fig. 3 is a similar view showing the presser bar depressed by the lever;

Figs. 4 and 5 are sectional views respectively on lines 4-4 and 5-5, Fig. 2;

Fig. 6 is a perspective view of the lever and its mounting;

Fig. 7 is a plan view of the blank from which is made the frame or box in which the lever is mounted;

Fig. 8 is a modification showing the lever connected with the presser bar and occupying a position corresponding to the compressing of the ink sack;

Fig. 9 is a longitudinal section of the modification, showing the lever and presser bar in normal position;

Fig. 10 is a detail sectional view showing a modified form of catch means for holding the lever yieldingly locked in normal position;

Fig. 11 is a plan view of a pen equipped with a modified form of mounting for the lever;

Figs. 12 and 13 are transverse sections on the lines 12-12 and 13-13, respectively, Fig. 1, with the ink sack and presser bar removed;

Fig. 14 is a perspective view of the lever and mounting unit of the type shown in Fig. 11;

Fig. 15 is a plan view of the box, frame or mounting for the lever;

Fig. 16 is a perspective view of the lever and a modified form of mounting, the parts being disassociated; and

Fig. 17 is a transverse section of a fountain pen with the lever mounting shown in Fig. 16.

Referring to the drawing, A designates the barrel of a fountain pen in which is contained an ink sack B that is deflated by the

usual presser bar 1. The presser bar is actuated by a lever 2 pivotally mounted in the barrel and is disposed within a slot 3, the lever being normally flush with the outer surface of the pen barrel, as clearly shown in Fig. 2. The presser bar is provided with a spring 4 which raises it when the lever is returned to normal position, so that the sack can expand and draw in a charge of ink.

The operating lever 2 is mounted within a frame C that is of such size as to fit in the slot 3 of the barrel. The frame or box is made from a blank of the form shown in Fig. 7, and comprises bar-like sides 5 and 6 connected by an end wall 7, and on the bar 5 is the opposite end wall 8, there being on the outer end of the side wall 6 a lug 9 which is bent against the outer surface of the end wall 8. The blank when bent up forms a rectangular box, and on the end walls thereof are lugs 10, 10^a and 11, 11^a, respectively. These two pairs of lugs serve as means for retaining the box or lever mounting in place, the lugs 10 and 11 being at the outside of the barrel of the pen and the lugs 10^a and 11^a at the inside. In putting in the box or frame C the internal lugs may stand more or less perpendicular to the length of the box, so as to be let into the slot 3 from the outside, and then by a suitable instrument inserted into the empty barrel of the pen, the lugs 10^a and 11^a can be bent back. It will be understood that before the box C is applied to the barrel, the lever 2 is mounted in the box by means of a pivot pin 12 which passes through the side members of the box and through the lever nearer one end thereof than the other. On the bar or side 5 of the box is an inwardly-extending lug 13^a adjacent the fulcrum of the lever, so as to form a stop to limit the throw of the latter in a direction to depress the bar, as clearly shown in Fig. 3.

The lever, which is preferably made from a sheet metal blank, has a flat end 13 disposed at right-angles to the length of the lever so that when the presser bar is depressed by the lever, as shown in Fig. 3, the said flat surface 13 will bear against the presser bar and hold the latter depressed, the lever when in this position being on a dead center. The sack being in this manner deflated, it merely remains to place the pen point of the fountain pen in a bottle of ink and throw the lever out of its dead center position in order to allow the presser bar to be raised by the spring 4, and the sack to expand so as to draw in a charge of ink. The presser bar engaging end of the lever has a projection 14 formed on its under side so that when the presser bar is in fully raised position it will engage this projection and thereby serve to hold the lever fully retracted in the box C, where it will be flush with the outer surface of the pen barrel. Instead, however, of relying on the presser bar to retain the lever in normal position, catch means are provided. According to one form the catch means comprises small projections 15 on the inner surfaces of the sides 5 and 6 of the box, which are adapted to enter depressions 16 in the sides of the lever 2, adjacent the operating end of the lever. By reason of this the lever after being thrown back from the position shown in Fig. 3 will be required to be pressed home into the box C, whereby the projections snap into the depressions 16. If desired, the lever may have yielding members 17, as shown in Fig. 10, which engage abutments 18 that may be formed by the sides of the slot in which the lever is mounted, or the box therefor. Obviously, other means may be devised to provide a catch to hold the lever yieldingly locked in normal position.

It may be desirable to utilize the lever 2 to raise the presser bar, and for this purpose the latter may be provided with a loop 19, as shown in Figs. 8 and 9, and on the lever is a pin 20 which slidably engages in the loops to thereby form a sliding hinge connection between the lever and presser bar. The lever will depress the presser bar in the manner hereinbefore described, but when the lever is restored to normal position the pin 20 by engaging the loop will raise the presser bar.

The box, frame or mounting D shown in Figs. 11 to 14 inclusive comprises a pair of members disposed parallel to each other and at opposite sides of the presser bar actuating lever 22. The members 21 may be of less length than the slot, as shown in Fig. 11, and they have their upper edges bent laterally into flanges 23 which engage in recesses 24 in the outer surface of the barrel, so that the flanges 23 will be flush with the barrel surface. The bottom edges of the members are bent into lateral flanges 25 which engage the inner surface of the barrel, as clearly shown in Figs. 12 and 13. These lugs or flanges 25 are normally straight, as shown by the full lines in Fig. 14, and when the mounting with the lever therein is placed in the slot of the fountain pen, the lugs 25 are bent laterally by a suitable instrument inserted in the barrel. A pivot pin 26 extends through the members 23 and lever 22 to hold the lever. The members 21 may be integrally connected by a cross bar 27 at the bottom edges of the members 21, and this cross bar serves as a stop for limiting the movement of the lever in a direction to deflate this sack of the fountain pen.

The lever mounting shown in Figs. 16 and 17 comprises spaced members 21^a which are like the members 21 of Fig. 14, except that they are separate, and the pivot 28 which passes through the members 21^a and

lever 22^a serves to unite these three parts to form a unitary device. This device is mounted in the slot of the fountain pen, as shown in Fig. 17, and then the lugs 21^a of the members are upset, as explained before. In the various forms of mountings it will be observed that the mounting and lever constitutes a unitary device and are assembled in the slot of the pen barrel without boring the same for the reception of the pivot pin for the lever, according to lever mountings heretofore proposed.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A fountain pen including a barrel having a slot, an ink holding sack therein, a presser bar for the sack, and actuating means for the presser bar, said means including a box fitted in the slot and a lever fulcrumed in the box.

2. A fountain pen including a barrel having a slot, an ink containing sack in the barrel, a presser bar for the sack, a lever for actuating the presser bar, a box set in the slot and in which the lever is fulcrumed, and lugs on the ends of the box and engaging the barrel for retaining the box in the slot.

3. A fountain pen including a barrel having a slot, an ink-containing sack in the barrel, and means for deflating the sack, said means comprising a lever, a frame disposed in the slot and in which the lever is fulcrumed, and means for fastening the frame in the slot.

4. A fountain pen including a barrel having a slot, an ink-containing sack in the barrel, and means for deflating the sack, said means comprising a lever, a frame disposed in the slot and in which the lever is fulcrumed, and a pair of lugs on the ends of the frame for internally and externally engaging the barrel at the ends of the slot therein.

5. A fountain pen including a barrel having a slot, an open frame lining the sides and ends of the slot and having a pair of lugs for internally and externally engaging the barrel to hold the frame in the slot, an ink-containing sack in the barrel, and means mounted on the sides of the frame for deflating the sack.

6. A fountain pen including a barrel having a slot, an open frame lining the slot and having a pair of lugs at each end for internally and externally engaging the barrel to hold the frame in the slot, an ink-containing sack in the barrel, a lever fulcrumed on the frame to deflate the sack, and a stop on the frame for limiting the movement of the lever in a direction to deflate the sack.

7. A fountain pen including a barrel having a slot, a lever fulcrumed therein, an ink-containing sack in the barrel, a presser bar for the sack, a frame in the slot, and a lug on one side of the frame and extending into the path of the lever for limiting the movement thereof in a direction to operate the presser bar, the bar-engaging end of the lever being flat to bear against the bar, whereby the lever is retained in dead center position when the bar is fully depressed.

8. A fountain pen including a barrel having a slot, an open frame disposed in and lining the slot and having means for retaining the frame in the slot, an ink sack in the barrel, a lever mounted on the frame to deflate the sack, and a stop on the frame for limiting the movement of the lever in a direction to deflate the sack.

9. A fountain pen including a barrel having a longitudinal slot and depressions in the outer surface of the barrel at the ends of the slot, a frame set into the slot and having lugs bent into the depressions, and the outer surfaces of the lugs being flush with the outer surface of the barrel, an ink sack in the barrel, and means mounted in the frame for deflating the sack.

10. A device for depressing the presser bar of a fountain pen, comprising a frame having a pair of attached lugs at the ends of the frame, and a first-class lever fulcrumed in the frame at a point between the ends thereof.

11. A device for depressing the presser bar of a fountain pen, comprising a frame having a pair of attached lugs at the ends of the frame, a first-class lever fulcrumed in the frame at a point between the ends thereof, and a stop lug within the frame for engagement by the lever to limit the movement thereof in one direction.

12. A fountain pen comprising a barrel having a slot the walls of which are imperforate, supporting members disposed in the slot and spaced apart, an ink sack in the barrel, a presser bar engaging the sack for deflating the same, actuating means for the presser bar, and means separate from the members for movably mounting the actuating means on the said members.

13. A fountain pen comprising a barrel having a slot the walls of which are imperforate, a lever in the slot and of such width as to leave spaces at each side of the lever, fixed members in the said spaces, means for

fulcruming the lever on the said members, an ink sack in the barrel, and means actuated by the lever for deflating the sack.

14. A fountain pen comprising a barrel 5 having a slot the walls of which are imperforate, a lever in the slot and of such width as to leave a space between a wall of the slot and the lever, a stationary member disposed in the space, means for pivoting the 10 lever on the said member, an ink sack in the barrel, and means actuated by the lever for deflating the sack.

15. A fountain pen presser bar actuating attachment in the form of a unitary self-contained device comprising a pair of spaced 15 parallel members having means for engaging the barrel for holding the members fixed, an elongated presser bar engaging element disposed between and parallel with the said 20 members, and means for movably mounting the element on the said members.

16. A fountain pen comprising a barrel provided with a longitudinal slot having imperforate side walls, a mounting fixed in the slot and disposed against the side walls, 25 a lever disposed in the mounting, and a pin passing through the lever and having its ends bearing in the mounting.

17. A fountain pen comprising a barrel having a slot provided with imperforate 30 walls, an ink sack in the barrel, and a presser bar for compressing the sack, in combination with a unitary, self-contained operating device for the presser bar, said 35 device comprising a supporting member disposed in the slot, a lever in the slot for engaging the presser bar, and a pivot pin passing through the supporting member and lever for mounting the lever on the supporting member.

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