

F. H. MOONEY;
 FOUNTAIN PEN.
 APPLICATION FILED NOV. 20, 1915.

1,272,697.

Patented July 16, 1918.

Fig. 1.

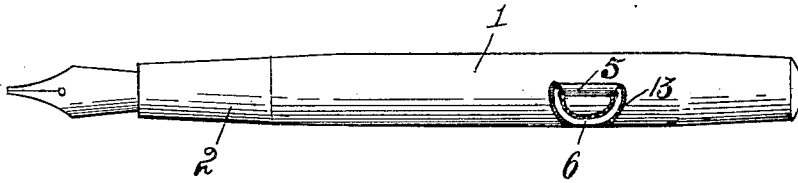


Fig. 2.

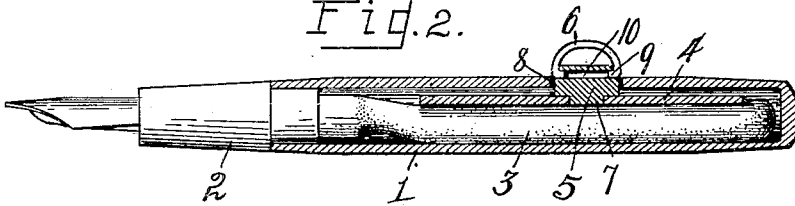


Fig. 3.

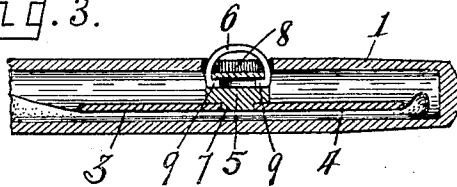


Fig. 4.

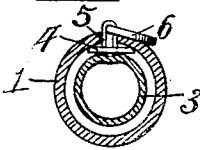


Fig. 5.

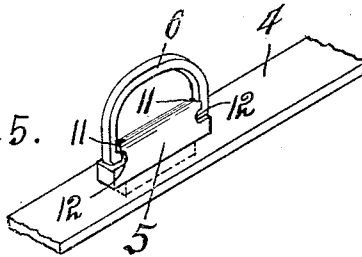
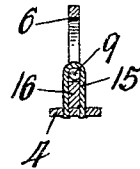


Fig. 6.



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UNITED STATES PATENT OFFICE.

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FOUNTAIN-PEN.

1,272,697.

Specification of Letters Patent.

Patented July 16, 1918.

Application filed November 20, 1915. Serial No. 62,499.

To all whom it may concern:

Be it known that I, FRANK H. MOONEY, a citizen of the United States, and a resident of Hinsdale, in the county of Dupage and State of Illinois, have invented a certain new and useful Fountain-Pen; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to fountain pens of the class in which the ink reservoir comprises a compressible tube, the expansion of which from compressed position draws in a supply of ink with which the inlet end of the tube may have communication.

The object of my invention is the provision of improved simple and efficient control means for the compressor bag of fountain pens, which means is also operable to lock the compressor bar against compressing movement.

A further object of my invention is the provision of a compressor bar control means of this character, which is carried entirely by the compressor bar and is capable of being easily and quickly placed in operative relation to or removed from the pen barrel together with the compressor bar, thereby providing a simple assembling proposition for pens of the class described. Further objects and advantages of the invention will be apparent from the following detailed description thereof.

While the invention in its broader aspect is capable of embodiment in numerous forms, a preferred and one slightly modified form thereof are illustrated in the accompanying drawings, in which,—

Figure 1 is a plan view of a fountain pen embodying my invention. Fig. 2 is a longitudinal section of a portion thereof with the compressor bar control means in unlocked position preparatory to a tube compressing movement thereof. Fig. 3 is a broken sectional view similar to Fig. 2 with the tube compressing means in tube compressing position. Fig. 4 is a cross-section of the barrel and tube with the compressor means in full. Fig. 5 is a perspective view of the compressor means embodying my in-

vention with the control lever thereof in unlocked or compressing position and with parts of the compressor bar broken away, and Fig. 6 is a cross-section of a slightly modified form of the compressor bar and its control means.

Referring to the drawings, 1 designates the usual barrel or casing of a fountain pen, 2 the pen point holding member, and 3 the ink reservoir, which is carried by the member 2 and is usually of a compressible nature, such, for instance, as a rubber tube. Disposed within the barrel 1 at one side of the tube 3 and in contact therewith is a compressor bar 4, which extends lengthwise of the tube and is adapted to be moved transversely of the barrel to effect a compressing of the tube 3 for a greater portion of its length to eject air therefrom, so that a subsequent expansion of the tube will draw a supply of ink into the reservoir or tube through the member 2, as is well understood in the art.

The control means for the compressor bar 4, in which the present invention resides, comprises a block 5 and lever member 6, the former being carried by the compressor bar 4 at the outer side thereof and the latter being pivotally carried by the block 5. For convenience of construction the compressor bar 4 and block 5 are made in separate pieces, which are rigidly secured together in any suitable manner, as for instance, by the projecting of a lug 7 from the under side of the block 5 through a registering opening in the bar 4, said lug being upset at its outer end or provided with other suitable means for preventing its withdrawal from the bar opening.

The block 5 is narrow in width with its length extending lengthwise of the bar 4 and is adapted to project outward from the interior of the barrel through a registering slot or opening 8 in the side wall thereof, the block being of suitable length to project at its outer end a short distance beyond the outer side of the barrel when the bar 4 is against the adjacent side of the barrel or is in restricted position with respect to the reservoir 3, as shown in Figs. 2 and 4.

The lever member 6 of the compressor bar control means is of bowed or bail form, in the present instance, with the ends thereof provided with axially registering intumed pivot-studs 9, 9, which are intended to piv-

otally engage within bearing recesses in the respective ends of the portion of the block 5 which projects without the barrel 1. The bearing recesses in the ends of the block 5 are provided, in the present instance, by drilling or otherwise forming an opening 10 entirely through the outer end portion of the block lengthwise thereof, as shown in Figs. 2 and 3. The bowed lever member 6 is preferably of a spring nature to adapt the ends thereof to spring into the respective bearing recesses of the block, thereby enabling the lever member to be easily and quickly engaged with or removed from the block 5 by an outward springing of the end portions of the lever member for such purpose.

The bar 5 is provided at each end thereof in radial relation to the opening 10 with two seats 11 and 12 in which the respective end portion of the lever member 6 respectively springs when in upright or reclining position with respect to the block 5, as best shown in Fig. 5. It is apparent that when the lever member 6 is in upright position the spring tendency thereof will cause its ends to spring into the respective seats 11 provided therefor in the block 5, thereby yieldingly retaining the lever member in such position, and that the ends of the lever member, when moved to reclining or transversely projecting position with respect to the block 5, spring into the registering seats or depressions 12 and yieldingly retain the lever member in such reclining position. When the lever 6 is placed in its reclining position, which may also be termed its locking position, it rests in a registering surface groove or seat 13 provided therefor in the outer surface of the barrel 1, thus preventing the entire width of the lever, when in such position, from projecting outward beyond the surface of the barrel 1. This also reduces the distance of projection of the block 5 without the barrel.

In Fig. 6 the lever carrying block, instead of being formed in a single piece, comprises a strip of sheet metal 15, which is of inverted U-form with its legs projecting through registering openings in the compressor bar 4 and having the filler block or piece 16 inserted therebetween without the compressor bar and cooperating with the looped end of the part 15 to form bearing openings at opposite ends of the block for receiving the respective bearing studs 8 of the bowed lever member 6. It will be understood that this is only one of numerous modifications which may be made of the lever carrying block 5 shown in the other figures of the drawing. It is also evident that the lever member 6 may be varied in form and in its manner of attaching to the block 5 without departing from the spirit of the invention, the form being merely illustrative of one embodiment thereof.

It will be understood from the above description that to operate the compressor bar 4 to effect a filling of the tube or reservoir 3 the member first unlocks the compressor bar by moving the lever 6 from its reclining position shown in Figs. 1 and 4 to the upright position shown in Figs. 2, 3 and 5. The operator then presses inward on the outer end of the lever, thereby causing it to enter the barrel opening 8 and to force the block 5 and compressor bar 4 inward to effect a complete compression of the reservoir tube 3. This having been done the pressure lever is relieved of the inward forcing pressure, thereby permitting the compressor bar, block 5 and lever 6 to move outward to their normal extended positions by the expanding and filling action of the reservoir 3, as is well understood in the art. The compressor bar is now locked in its normal raised position by swinging the lever 6 from its upright to its reclining position with respect to the block 5, which latter position it yieldingly retains by reason of the lever ends springing into the seats 12 provided therefor in its block ends. As the lever 6 is swung from its upright to its reclining or locking position the inner end portion of the lever will have bearing or fulcrum contact with the marginal edge wall of the opening 8 over which it is swung and will thereby exert an outward pulling or leverage pressure on the block 5 to draw it and the compressor bar 4 outward to the full limit of their movements so that the compressor bar 4 and its attached parts are not only held against free or rattling movements within the barrel, but the reservoir 3 is relieved of the pressure of the bar thereon which might be present if the bar were free to have limited transverse movements within the barrel when in locked position.

It is evident that the control means which I have provided for the pressure bar enables the parts to be easily and quickly assembled without pivoting or attaching any part to the pen barrel, as it is only necessary to insert the compressor bar 4 and the block 5 carried thereby into the barrel 1 through the open end thereof, project the block 5 outward through the barrel slot or opening 8 and then place the lever member 6 into engagement with the projected end of the block.

While I have herein shown and described a specific embodiment of my invention for illustrative purposes, and have disclosed and discussed in detail the construction and arrangement incident to one application thereof, it is to be understood that the invention is not limited to the mere detail or relative arrangement of the parts, but that deviations from the illustrated form or embodiment of the invention may be made without departing from the spirit of the claims.

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

1. In a fountain pen, a barrel having an opening in a side thereof, a reservoir compressor bar having a part projecting from the outer side thereof, and a bowed form of lever having its ends in pivotal longitudinal spring engagement with said part and operable from without the barrel to exert an inward reservoir compressing movement to said part and bar and being movable relative to the bar and barrel to coact with the latter to lock the bar in normal position.

2. In a fountain pen, a barrel having an opening in a side thereof, a reservoir compressor bar disposed in said barrel and having a part for projecting into said opening, said part having axially alined bearings which are spaced lengthwise of the barrel, and a bail-like member having releasable spring engagement with said bearings for

pivotal movements transversely of the barrel and operable to impart reservoir compressing movement to said bar or to lock the bar in one position of its movement.

3. In a fountain pen, a barrel having an opening in its side wall, a reservoir compressor bar disposed within the barrel and having a part projecting outward therefrom and into said opening, said part being elongated in form lengthwise of the barrel and having its outer end portion provided with axially registering bearing sockets which are spaced lengthwise of the barrel, and a bowed form of control lever having its ends provided with pivot studs which are sprung into said sockets, said lever being operable to impart a compressing movement to said bar from without the barrel and to coact with the barrel to lock the bar in inoperative position.

In testimony whereof, I have hereunto signed my name to this specification.

FRANK H. MOONEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."