W. E. MOORE.

PRESSURE BAR MECHANISM.

APPLICATION FILED APR. 23, 1919.

1,346,045. Patented July 6, 1920.

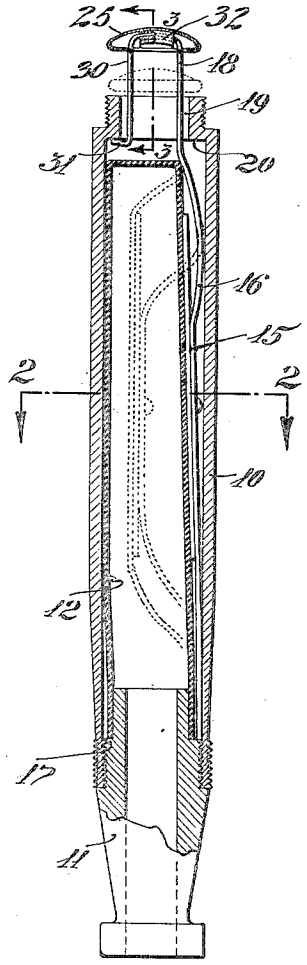
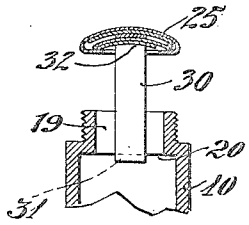


Fig. 1.

Fig. 3.



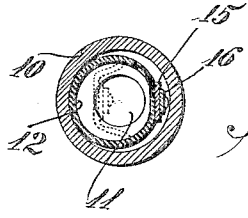


Fig. 2.

WITNESSES

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PRESSURE-BAR MECHANISM.

1,346,045. Specification of Letters Patent. Patented July 6, 1920.

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To all whom it may concern:

Be it known that I, WILLIAM E. MOORE, a citizen of the United States, and a resident of Janesville, in the county of Rock and State of Wisconsin, have invented a new and Improved Pressure-Bar Mechanism, of which the following is a full, clear, and exact description.

The invention relates to filling fountain pens having a compressible bag.

The object of the invention is to provide a new and improved pressure bar mechanism provided with locking means adapted to engage an interior shoulder in the barrel to normally lock the pressure bar mechanism in position on the barrel but to allow free functioning of the same whenever it is desired to fill the fountain pen. Another object is to permit the user to conveniently unlock the pressure bar mechanism for removal from the barrel whenever it is desired to do so.

With these and other objects in view, the invention consists of certain novel features of construction, as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improved pressure bar mechanism in position on the barrel of the fountain pen, parts of the latter being shown in section;

Fig. 2 is a sectional plan view of the same on the line 2—2 of Fig. 1; and

Fig. 3 is an enlarged cross section of the pressure bar mechanism on the line 3—3 of Fig. 1.

The barrel 10 of the fountain pen is provided at its forward end with the usual nozzle 11 adapted to support the pen, and on the inner end of the nozzle 11 is attached the open end of an inflatable bag 12 extending lengthwise within the barrel 10. One side of the bag 12 is engaged by a pressure bar 15 riveted or otherwise secured to the middle of a flat spring 16 having its forward end resting on a shoulder 17 formed on the nozzle 11. The rear end 18 of the flat spring 16 extends through the open end 19 of the barrel 10 and this opening 19 is somewhat reduced to form with the interior of the barrel a shoulder 20, as plainly shown in Fig. 1. The outer end of the flat spring 16 is attached to a button 25 adapted to be pressed by the user of the fountain pen whenever it is desired to collapse the bag 12, as indicated in dotted lines in Fig. 1, it being understood that on releasing the button 25 the spring 16 returns to normal position thus allowing the bag 12 to reinflate and draw in the ink in the usual manner.

The pressure bar mechanism, comprising the bar 15, the spring 16 and the button 25, is normally held against removal from the barrel 10 and for this purpose use is made of a locking member 30 depending from the button 25 and projecting through the opening 19 into the barrel 10. The inner end of the locking member 30 terminates in an angular lug 31 normally engaging the shoulder 20 thus holding the pressure bar mechanism normally locked in position, at the same time allowing pressing of the button 25 for collapsing the bag 12, as previously explained.

In practice the locking member 30 forms a continuation of the end 18 of the spring 16, it being understood that for this the piece of which the spring is made is doubled up to provide a return bend which forms the locking member 30. The bend of the spring material is fastened in place by a cross piece 32 (see Fig. 3) extending under the bend and fitting with its ends into the rim of the button. From the foregoing it will be seen that the pressure bar mechanism is normally held in position in the barrel 10, but when it is desired to remove the pressure bar mechanism from the barrel it is only necessary for the operator to press the locking member 30 toward the spring 16 to disengage the lug 31 from the shoulder 20 to allow withdrawal of the pressure bar mechanism from the barrel 10 by way of the open end 19. The pressure bar mechanism can be readily reinserted in the barrel by pressing the locking member 30 toward the spring to allow the lug 31 to pass into and through the opening 19 to then engage the shoulder 20 on releasing the pressure on the locking member 30.

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

1. A pressure bar mechanism for fountain

pens having a barrel and a compressible filling bag therein comprising a pressure bar in contact with the said bag, a flat spring carrying the said pressure bar and having its inner end seated in the barrel and the other end extending through the rear end of the barrel, a button on the outer end of the said spring, and a locking member depending from the said button and extending through the rear open end of the barrel, the inner end of the locking member having an angular locking lug normally engaging an annular inner shoulder within the barrel to hold the pressure bar mechanism against removal.

2. A pressure bar mechanism for fountain pens having a barrel and a compressible filling bag therein comprising a pressure bar in contact with the said bag, a flat spring carrying the said pressure bar and having its inner end seated in the barrel and the other end extending through the rear end of the barrel, the outer end of the said spring having a return bent locking member terminating in an angular shoulder within the barrel, and a button attached to the bend on the outer end of the said spring.

3. In a fountain pen, a barrel having a rear open end and an interior shoulder at this end, a nozzle at the forward end of the barrel, a collapsible bag held on the nozzle and extending within the said barrel, a pressure bar within the barrel and engaging the said bag, a spring carrying the said pressure bar and extending through the open end of the barrel, a button on the outer end of the spring, and a locking member depending from the button and extending into the rear end of the barrel, the said locking member having an angular lug engaging the said shoulder.

4. In a fountain pen, a pressure device of the class described extending rearwardly from the barrel of said pen, said rearward extension beyond the barrel of said pen having a locking member extending into and adapted to engage the barrel to normally hold the pressure device against removal, the locking member being resilient to allow of disengaging it from the barrel to permit withdrawal of the pressure device from the barrel.

WILLIAM EDGAR MOORE.