F. H. MOONEY.

PRESSER BAR CONTROL FOR FOUNTAIN PENS.

APPLICATION FILED JAN. 3, 1916.

1,266,141.

Patented May 14, 1918.

Fig. 1.

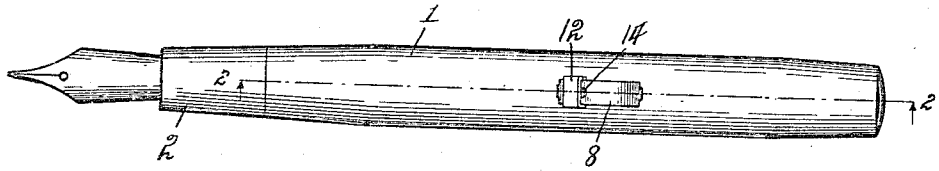


Fig. 2.

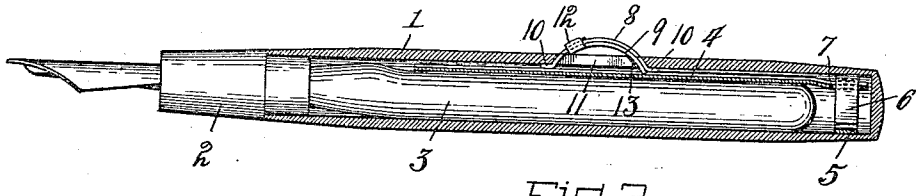
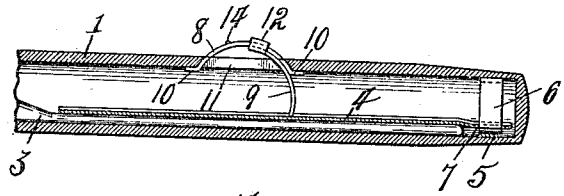


Fig. 3.



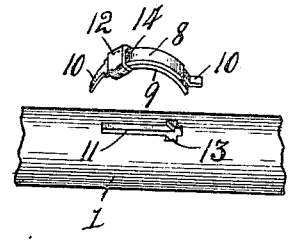
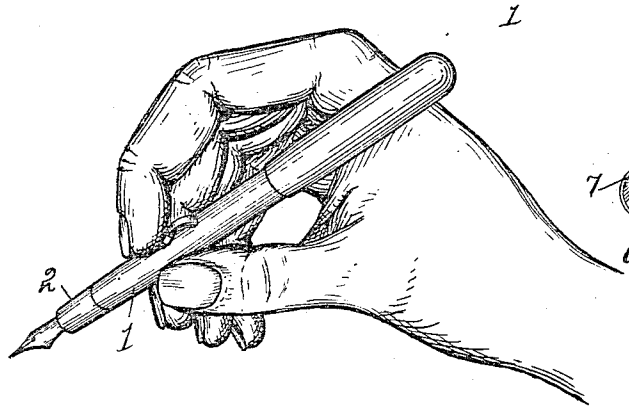


Fig. 4.

Fig. 5.



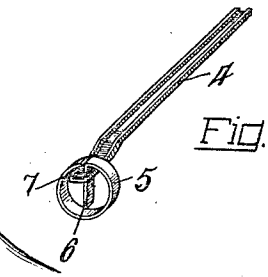


Fig. 6.

INVENTOR

Frank H. Mooney,

By Owen, Owen & Crampton,

His attys.

UNITED STATES PATENT OFFICE.

FRANK H. MOONEY, OF TOLEDO, OHIO, ASSIGNOR TO THE CONKLIN PEN MANUFACTURING COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

PRESSER-BAR CONTROL FOR FOUNTAIN-PENS.

1,266,141. Specification of Letters Patent. Patented May 14, 1918.

Application filed January 3, 1916. Serial No. 70,025.

To all whom it may concern:

Be it known that I, FRANK H. MOONEY, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Presser-Bar Control for Fountain-Pens; 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 or bag, the expansion of which, from compressed form, is intended to draw in a supply of ink with which the inlet end of the tube may have communication.

The object of my invention is the provision, in a fountain pen of the character described, of simple and improved means for compressing the ink reservoir during the ink filling operation.

A further object of my invention is the provision of improved means within the pen barrel for anchoring the presser-bar against longitudinal movements.

The invention is fully described in the following specification, and while in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a side view of a fountain pen embodying the invention. Fig. 2 is a sectional view on the line 2—2 in Fig. 1 with the presser-bar control means in normal position. Fig. 3 is a similar view of a portion of the pen with the presser-bar and its control means in depressed position. Fig. 4 is a perspective view of a portion of the pen barrel and presser-bar control means in assembling relation, and Fig. 5 is a view illustrating one manner of holding the pen for filling, and Fig. 6 is a detail view of the presser bar.

Referring to the drawings, 1 designates the customary 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 of a resilient compressible nature, such, for instance, as a rubber bag of tubular form. Disposed within the barrel 1 at one side of the ink bag 2, and in contact therewith, is a presser-bar 4, which extends lengthwise of the bag and is adapted to be moved transversely of the barrel to effect a compressing of the bag for a greater portion of its length to eject air therefrom, whereby an expansion of the bag will draw a supply of ink therein, as is well understood in the art.

Fitting closely within the barrel beyond the closed end of the bag 2 is a split ring 5, preferably of spring metal, to adapt it to spring outward against and frictionally engage the wall or shell portion of the barrel. This ring has one end provided with a reëntrant extension 6, forming a tongue which extends diametrically of the ring from one side to or near the other thereof and loosely through an opening 7 in one end of the presser-bar, whereby the bar is permitted to have free movements transversely of the barrel and is anchored against movements lengthwise thereof. The spring nature of the ring enables it to be easily inserted in position in the barrel through the open end thereof.

The control means for the presser-bar in the form illustrated comprises a guide 8 and a plunger member 9, both of arcuate or segmental form. The guide 8, which is preferably of metallic bar form of a bendable nature, is provided at each end, in the present instance, with a tongue 10, which is narrowed with respect to the body of the guide-bar to provide shoulders and is inserted through an opening provided therefor in the barrel side adjacent to the flat side of the presser-bar 4 which is opposed to the ink bag, the tongue then being clenched at its free end against the inner side of the barrel, as shown in Figs. 2 and 3, to retain the guide in engagement therewith. The tongues 10, in the present instance, are inserted through the opposite ends of a slot 11 provided lengthwise in the barrel 1, and the tongue ends are bent outward under the end walls of the slot by inserting a bar or mandrel into the barrel, or in any other suitable or convenient manner.

The plunger 9 is preferably fitted against the inner side of the guide-bar 8 in concentric relation thereto and has one end provided with a guide loop or part 12, which loosely embraces the guide-bar for sliding movements thereon. The other end of the plunger projects through or registers with a broadened guide portion 13 of the slot 11, at one end thereof, so that the plunger has rotary reciprocatory movements through said guide opening 13 when moved in one direction or the other with respect to the guide-bar 8. The plunger is preferably of such length that when at the limit of its retracting stroke, as shown in Figs. 1, 2 and 4, the free end thereof is adjacent to the inner edge of the guide opening 13 in position to coact with and effect a depression of the presser-bar 4 within the barrel when the plunger is moved inward, as shown in Fig. 3.

It is evident that the arcuate form of the plunger and its guide causes its inner or presser-bar coacting end to have movement transversely of the barrel to effect a depression or release of the presser-bar when the guide end of the plunger is moved lengthwise with the guide-bar 8. It is also evident that the guide loop or part 12 on the plunger serves as a finger-piece to facilitate a movement of the plunger. 14 designates a slightly raised portion on the guide-bar 8 for coacting with the plunger guide part 12 when in retracted position to yieldingly retain it in such position. It is found in practice, however, that the provision of means on the guide-bar for resisting an initial movement of the plunger from retracted position is not necessary, as the resiliency of the rubber bag 3 is not only sufficient to lift the presser-bar 4 and return the plunger to its retracted position when released, but effectually retains the plunger in such position.

It is preferable to so dispose the plunger that when in retracted position the guide part 12 thereof stands at the end of the guide-bar 8 which is adjacent to the pen point, thereby facilitating the filling operation by enabling the user when holding the pen in writing position to engage the guide part 12 with the first finger of the hand holding the pen and easily move the plunger 9 to depress the presser-bar preparatory to filling, as illustrated in Fig. 5.

I wish it understood that my invention is not limited to any specific construction, arrangement or form of the parts, as it is capable of numerous modifications without departing from the spirit of the invention as defined by 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 reservoir presser bar, and an arcuate plunger carried by the pen barrel and slidable bodily and longitudinally in a plane lengthwise of the pen barrel to compress said bar.

2. In a fountain pen, a reservoir presser bar, and an arcuate plunger carried by the pen barrel and slidable bodily in an arc in a plane lengthwise of the pen barrel to compress said bar.

3. A fountain pen having an arcuate presser bar depressing member which is arcuately movable in a plane longitudinal to the pen to depress the bar, and a segmental member for guiding the movements of said arcuate member.

4. In a fountain pen, a barrel, a reservoir presser-bar therein, and presser-bar control means having a circularly movable bar depressing part movable in a plane longitudinal to the barrel and a circular guide therefor.

5. In a fountain pen, a barrel, a reservoir presser-bar therein, a guide carried by the barrel, and a bar depressing member carried by the guide for longitudinal movements lengthwise thereof and of the barrel and at the same time into and out of the barrel.

6. In a fountain pen, a barrel, a reservoir presser-bar therein, a segmental guide carried by the barrel lengthwise thereof, and a segmental plunger concentric to said guide and guided for presser bar depressing movements thereby.

7. In a fountain pen, a barrel having an opening therein, a reservoir presser bar in said barrel, a guide mounted on the barrel and extending lengthwise thereof adjacent to said opening, and means guided for movement by said guide and movable lengthwise thereof through said opening into and out of bar depressing position.

8. In a fountain pen, a barrel, a reservoir presser bar therein, a guide-bar carried by the barrel, and means guided for movement by said guide-bar and movable into and out of bar depressing position and having a finger piece movable lengthwise of the guide-bar.

9. In a fountain pen, a barrel, a reservoir presser bar therein, a guide bar carried by the barrel, and a segmental plunger guided for oscillatory movement into and out of said barrel transversely thereof to depress and release the presser-bar and having a guide part embracing said guide bar and forming a finger piece.

10. In a fountain pen, a barrel, a reservoir presser bar therein, and two segmental parts, one part being a bar depressing plunger movable lengthwise of the other part and said other part being fixed to the barrel and guiding the movements of said plunger.

11. In a fountain pen, a barrel, a reservoir presser bar, a guide fixed to the barrel, and a plunger having one end slidingly engaged

with said guide and its other end movable into and out of the barrel to control the movements of the presser bar.

12. In a fountain pen, a barrel having a slot therein, a reservoir presser bar in said barrel, a segmental guide strip disposed lengthwise of the barrel and having a tongue at each end thereof inserted through opposite end portions of said slot and engaged under the end walls thereof, and an arcuate plunger slidingly carried by said guide strip and having one end movable through one end portion of said slot into bar depressing position within the barrel.

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."