Dec. 23, 1930. R. P. MARKSTEIN 1,786,355

DEVICE FOR TIMELY OPENING AND CLOSING OF THE FLAP OF FOUNTAIN PENS

Filed Dec. 4, 1929

Fig. 1.

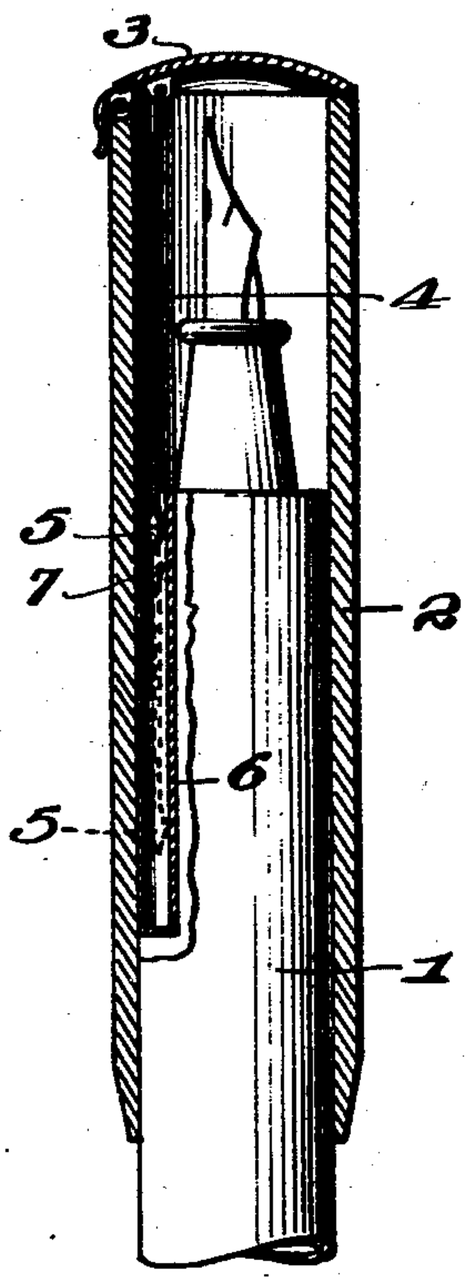


Fig. 2.

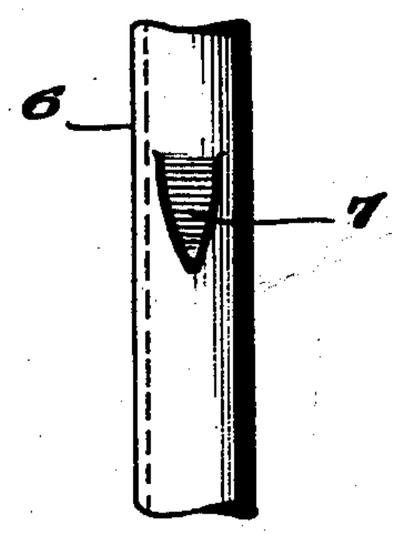


Fig. 3.

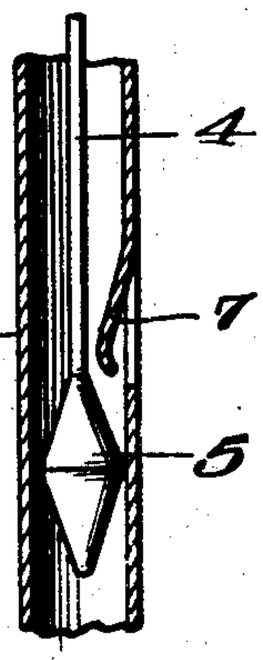


Fig. 4.

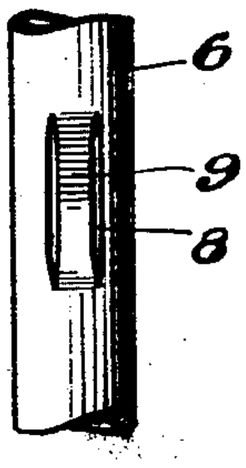
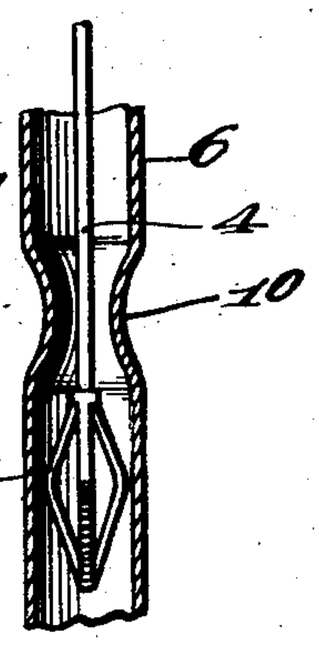


Fig. 5.



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UNITED STATES PATENT OFFICE

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DEVICE FOR TIMELY OPENING AND CLOSING OF THE FLAP OF FOUNTAIN PENS

Application filed December 4, 1929, Serial No. 411,604, and in Austria October 24, 1929.

Fountain pens are known in which the flap serving to close the exit opening for the pen is opened prior to the exit of the writing pen and closed after said writing pen has completely reentered the protecting sleeve. Heretofore a spring, usually a spiral spring, has been used for this purpose which spring coacts with a member actuating the flap. Such a spring is not reliable and is continuously tensioned in at least one of the two positions of the fountain pen and also needs considerable space in which to operate.

The object of this invention is to provide an improved fountain constructed to overcome these defects and in which the operating member directly acting on the closure flap is temporarily coupled by means of a yieldable stop to a part of the fountain pen barrel on which the protecting sleeve carrying the flap is slidable, so that the operating member is caused to actuate the flap or closure.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings

Figure 1 is a longitudinal section of the front portion of a fountain pen embodying my improvements.

Figure 2 is an elevation of the guideway provided with a yieldable stop in accordance with one form of the invention.

Figure 3 is a sectional view of the same, also showing the operating rod and its stop device.

Figures 4 and 5 are views similar to Figures 2 and 3, showing slightly different forms of the stop devices.

The fountain pen here shown carries slidably mounted on its barrel 1 a protection sleeve 2 having a flap 3 for closing the exit opening for the pen. An operating rod 4 is pivoted to a point of the flap spaced from its hinge and said rod has a reenforcement forming a stop device 5 tapering upwardly and downwardly and extending into a guide 6 provided on the barrel. This guide is preferably a tube of slight diameter having a spring tongue 7, which tongue projects into the tube. By sliding the sleeve 2 downwardly on barrel 1 to make the writing pen ready for writing, the reenforcement stop device 5 meets the spring tongue 7 and thereby encounters frictional yielding resistance, which causes the flap 3 to be opened by the rod before it is reached by the writing pen. After the flap has been completely opened, the reenforcement stop 5 overcomes the resistance of the tongue 7 and passes beyond said tongue into the lower portion of the guide in which the reenforcement stop 5 is freely slidable.

When sliding the slotted protection sleeve 2 again upwards, that is, when returning the writing pen into the protecting sleeve 2, the reenforcement stop 5 moves at first upwardly in the guide 6 until it abuts against the tongue 7, and by reason of the resistance encountered thereby, the flap 3 is closed after the writing pen has completely entered the protecting sleeve 2. Finally the reenforcement stop 5 passes beyond the tongue 7 to reach the end position indicated in full lines in Figure 1. Instead of the spring tongue 7, a bridge 9 can be provided in the guide tube which is pressed inwardly between two separating slots 8 (Figure 4).

Furthermore, the reenforcement 5′ can be made yieldable by means of slots in which case the guide 6 is narrowed near its upper end at 10, as shown in Figure 5.

While I have herein shown and described several forms of my invention, I would have it understood that further changes may be made in the form, proportion and construction of the several parts within the scope of my invention as defined in the appended claims.

What I claim is:

1. A pen barrel, a protecting sleeve for the pen slidable on the barrel and having a pivoted closure at its outer end, an operating rod for the closure, and coacting means, on the barrel and on the rod, to temporarily resist relative movement between the sleeve and the barrel and thereby cause the rod to operate the closure.

2. Apparatus as claimed in claim 1, in which the coacting means are stop devices, one of which is yieldable to resist but yet permit the passage of the other.

3. A pen barrel having a guideway, a protecting sleeve for the pen slidable on the barrel and having a pivoted closure at its outer end, an operating rod for the closure movable longitudinally in the guideway, and coacting means on the rod and in the guideway, to temporarily resist movement of the rod in the guideway and thereby cause the rod to operate the closure.

4. Apparatus as claimed in claim 3, in which the coacting means are stop devices one of which is yieldable to resist but yet permit the passage of the other.

In witness whereof I affix my signature.

ROBERT PETER MARKSTEIN.