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M. G. SYPHER

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FOUNTAIN PEN AND THE LIKE

Filed March 31, 1934

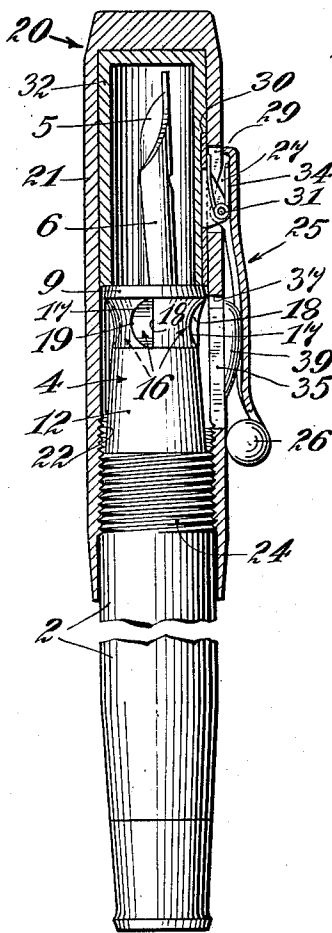


Fig. 1.

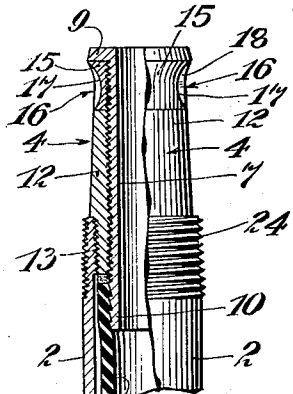


Fig. 4.

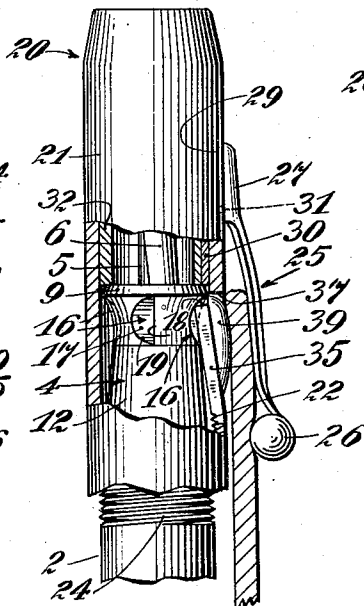


Fig. 2.

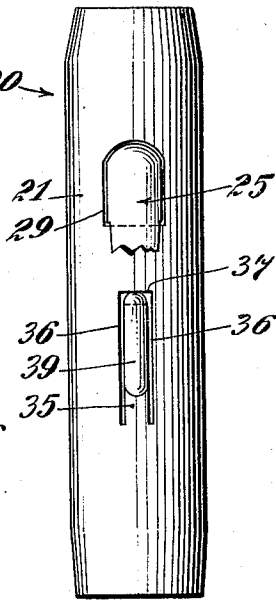


Fig. 3.

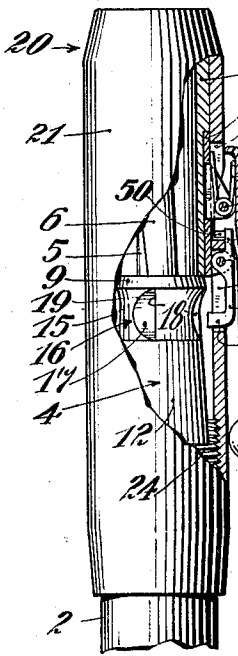


Fig. 6.

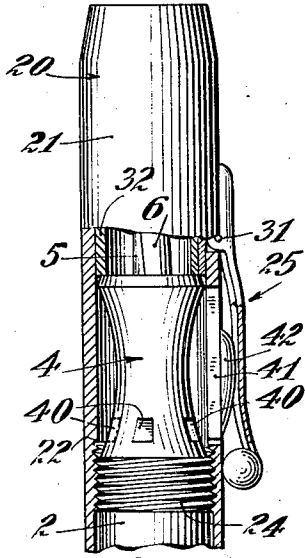


Fig. 5.

INVENTOR
Milford Guy Sypher
BY
Norman Holland
ATTORNEY

UNITED STATES PATENT OFFICE

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FOUNTAIN PEN AND THE LIKE

Milford Guy Sypher, Belleville, N. Y., assignor
to The Chilton Pen Company, Inc., Long
Island City, N. Y., a corporation of New York

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11 Claims. (Cl. 120-42)

The present invention relates to fountain pens and the like and is an improvement over the construction shown in the patent to David F. Johnson, No. 1,344,897, dated June 29, 1920.

5 Preferably, fountain pens are provided with a cap for protecting the pen point with a clip thereon for engaging the pocket of a garment to facilitate carrying the pen. Frequently, while the pen is being carried, the cap and body part of the pen separate. As a result, the pen falls into the bottom of the pocket and the exposed pen point soils the garment. This is objectionable, since ink stains are difficult to remove and may cause considerable damage to a person's clothing. A further objection is that material such as cloth is absorbent and draws all the ink from the pen. Thus, when the pen is to be used, it is dry and must be refilled.

10 The present invention aims to overcome these difficulties in a simple, practical manner by providing an inexpensive, serviceable, automatic cap locking device for preventing the cap and the body part of the pen from separating accidentally.

15 An object of the present invention is to provide a cap locking device for fountain pens and the like, which can be readily manufactured at a low cost.

20 Another object of the invention is to provide a cap locking device having a minimum number of parts.

25 Another object of the invention is to provide a simple cap locking device adapted to be applied to existing types of fountain pens.

30 Another object of the invention is to provide a serviceable cap locking device which is automatic in operation.

35 Another object of the invention is to provide a cap locking device which cooperates with the pocket clip of the pen.

40 A further object of the invention is to provide a cap locking device which enhances the appearance of the fountain pen.

45 Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

50 A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawing, wherein

55 Fig. 1 is an elevational view, partly in section, illustrating a preferred embodiment of the invention;

Fig. 2 is an enlarged sectional view, partly in section, illustrating the operation of the preferred embodiment;

60 Fig. 3 is an enlarged elevational view of the

cap locking device, the clip being broken away for clearness;

Fig. 4 is an enlarged sectional view illustrating a preferred embodiment of a pen supporting section;

Fig. 5 is an elevational view, partly in section, illustrating another embodiment of the invention; and

Fig. 6 is a fragmentary sectional view, illustrating a further embodiment of the invention.

Referring again to the drawing, and more particularly to Figs. 1 to 4, there is shown a fountain pen comprising a barrel 2 having suitable devices therein for filling the pen, and a pen section 4 for mounting a feed bar 5 and a pen point 6.

The pen section 4 preferably comprises an inner tubular member 7 having a shoulder 9 at one end and a centrally disposed bore for receiving the feed bar 5 and the pen point 6 (Fig. 4). The other end of the inner member 7 may be provided with a nipple portion 10 for securing a suitable ink sac 11 thereto adapted to supply ink to the pen point 6.

A sleeve or tubular gripping member 12 provided with threads 13 for connecting the pen section to the barrel is mounted on the inner member 7, and a collar or band member 15 is mounted on the inner member between the shoulder 9 and the tubular gripping section 12. If desired, the tubular member 7 may be provided with screw threads or the like (Fig. 4) so that the collar 15 and gripping member 12 may be threaded thereon. The collar 15 is provided with suitable ratchet portions or recesses 16, herein shown as four in number, which are adapted to be engaged by a suitable member associated with a pen point protecting cap, about to be described, for locking the cap to the pen section. Preferably, the ratchet portions or notches comprise cam shaped recesses 17 terminating, at one end, in stop faces or projections 18, and merging or sloping into the outer surface of the collar at 19. It will be understood that other forms of recesses or ratchet means may be employed and any desired number of ratchet portions may be utilized without sacrificing the advantages of the present invention.

An advantage of the above described pen section is that the inner member may be made of substantially non-shrinkable material and the outer members, namely, the ratchet collar 15 and gripping member 12, may be threaded thereon and shrunk into engagement therewith to provide a compact serviceable structure. The gripping member 12 may be made of material which matches the barrel or may be made of material having any desired color. If desired, the gripping member 12 may be made of hard rubber. The collar 15 preferably is made of material having an attractive color, such as red, so

that attention is directed to the improved locking device. Materials, such as pyroxylin, are suitable for this purpose, since they can be produced in almost any color. The collar 15 thus enhances the appearance of the pen and may be used as a trade-mark or identification mark.

A suitable pen cap 20 is provided for covering and protecting the pen point when the pen is not in use. Preferably, the cap matches the barrel of the pen and is made of the same material as the barrel. Preferably, pyroxylin is utilized because it can be produced in attractive colors, and is slightly resilient and substantially unbreakable. The cap may have a tubular skirt 21 adapted to be telescoped over the pen section and threads 22 are formed therein, for engaging corresponding threads 24 on the barrel. The pen may be carried conveniently in the pocket of a garment by providing a clip 25 on the cap having a substantially ball-shaped engaging portion 26 at one end thereof and having suitable in-turned portions, 27 at the other end for attaching the clip to the cap. Preferably, the clip is pivotally mounted with respect to the cap by extending the portions 27 into a slot or aperture 29 formed in the cap and connecting the portions 27 to a suitable anchor bar 30 by means of a pin 31. The anchor bar is secured to the cap by a tubular sleeve 32 telescoped into the skirt of the cap. A suitable spring 34 is mounted on the pin 31 and its respective ends engage the anchor bar and the clip to hold the clip resiliently in engaging position. While other forms of clips may be utilized, the above described clip is particularly desirable because it is adapted to effectively engage materials of any thickness without damaging the material. In addition, the clip is particularly adapted to be used in connection with the cap locking device about to be described.

In order to prevent accidental separation of the cap and the barrel, a suitable latch or tongue portion 35 is provided in the skirt of the cap for engaging the ratchet recesses or notches 16 on the pen section collar 15. Since the material of the cap is slightly resilient, it is desirable and advantageous to form the latch integral with or from the skirt of the cap. This may be done conveniently and inexpensively by providing a pair of longitudinal slots 36 in the cap and joining them at one end by a transversely extending slot 37 to define the tip of the latch. Preferably, the latch is positioned beneath the clip and is provided at the tip thereof with an outwardly extending member or button 39 adapted to cooperate with the clip. When the clip engages a piece of material, the thickness of the material forces the tongue inwardly. This is further facilitated by the spring action of the clip which forces the material against the button. Removal of the cap is prevented, since the latch either is engaging one of the recesses 16 or, upon unscrewing of the cap, the latch will engage a recess.

A feature of the present invention is that the projection on the member 35 is substantially arcuate or convex and permits the material of a pocket or the like to readily fit between the clip and the button without tearing or damaging the material. For this reason, the button member may be spaced closely to the clip so that the latch is effective even when the pen is clipped to relatively thin material. The spring mounting permits the clip to be attached to relatively thick material without danger of breaking the latch or forcing it too tightly against the pen

section. In this manner, the cap locking device is automatically operated by material of various thicknesses.

A further advantage of the above described cap locking construction is that the latch can be made without material increase in cost. Complicated locking attachments, which are expensive, which are attached with great difficulty, and which mar the appearance of the pen, are eliminated. The button 39 can be readily attached to the latch by cementing it or molding it thereon. If desired, the button may be made of material having a distinctive color, such as red, to attract the purchaser's attention to the improved cap locking means.

In Fig. 5, a slightly different pen cap locking device is shown, wherein ratchet portions or recesses 40 are provided at the lower portion of the gripping section 12. In this manner, a separate collar need not be utilized and the number of parts and the cost of making the pen section are reduced. The pen cap is provided with a latch 41 extending longitudinally beneath the clip and terminating adjacent to the lower end of the clip and a suitable button member 42 is provided on the latch for facilitating inward movement of the latch to engage the ratchet portions 40 on the pen section.

Another form of pen cap locking device is illustrated in Fig. 6. The cap has a slot 43 for receiving a latch member 44 mounted on an anchor bar 45 at 46. One end of the latch member is provided with a radially inwardly extending portion 48 for engaging a suitable recess 16 on the pen section, while the other end 49 extends beneath a clip 51 for attaching the pen to a pocket or the like. Preferably, the clip is pivotally mounted on the anchor bar at 52 and is provided with tab portions or fingers 50 adapted to engage and oscillate the upper end 49 of the latch. When the clip engages a piece of material and is oscillated with respect to the anchor bar, the end 49 of the latch is moved radially outwardly, whereby the end 48 of the latch is moved radially inwardly to engage one of the locking recesses 16.

Fountain pens provided with the above described devices are used in the usual manner. When the pen is to be carried in the pocket, the cap 20 is screwed on the barrel. The clip is then attached to the material of the pocket. As the material is inserted between the clip and the button on the latch member (Figs. 1 to 5), the latch member is forced radially inwardly so that the inner end of the latch engages the ratchet collar. The cap cannot be unscrewed because the latch extends into one of the notches on the collar. When the pen is removed from the pocket, the latch, due to its resiliency, moves out of engagement with the ratchet collar and the cap can be readily unscrewed. In this manner, the locking devices are entirely automatic in operation. The device shown in Fig. 6 is operated by the clip when it is moved away from the skirt of the cap.

It will be seen that the present invention provides a simple cap locking construction made from parts which can be readily manufactured. The locking device is automatic in operation and permits the cap to be removed and replaced in minimum time and with minimum effort. When the pen is clipped to a pocket, the locking device and the clip cooperate to lock the cap securely on the barrel of the pen. While being carried in this manner, the cap and barrel cannot come

apart. The pen cannot leak and stain the garment. In addition, the locking means of the present invention enhance the appearance of the pen and can readily be applied to any type of pen without materially increasing the cost thereof. The locking device is rugged in construction and is fully capable of withstanding any rough usage to which it may be subjected.

As various changes may be made in the form, construction and arrangement of parts without departing from the spirit and scope of the invention and without sacrificing its advantages, it is to be understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A pen supporting section for fountain pens and the like, comprising an inner member having threads thereon, a member telescoped and threaded over said inner member for manually gripping the pen section, and a collar member telescoped over said inner member, said collar member having notches therein adapted to lock a pen protecting cap against accidental removal from said pen section.

2. A cap for a fountain pen and the like, comprising in combination a tubular member, a clip pivotally mounted on said tubular member, and a latch member pivotally mounted on said tubular member adapted to engage a pen section, said clip having a portion for engaging said latch, said clip when engaging the wall of a pocket being adapted to move said latch into engagement with the pen section.

3. In a fountain pen and the like, the combination of a pen section having ratchet means formed therein, a cap having a latch member pivotally mounted thereon for engaging said ratchet means, and a clip attached to said cap for engaging the wall of a pocket and the like, said clip having a portion for engaging and moving said latch member in response to movement of said clip.

4. In a fountain pen and the like, the combination of a pen protecting cap having a movable latch, and a pen section having an inner tubular member formed of substantially non-shrinkable material, a member telescoped over said inner member providing a finger grip, and a collar member formed of a shrinkable material telescoped over said inner member and secured thereto, said collar member having notches therein adapted to be engaged by said latch on said pen protecting cap.

5. In a fountain pen, the combination of a barrel, a pen supporting section having a collar member secured thereto at one end thereof, said collar having ratchet portions therein, and a pen point protecting cap adapted to be telescoped over said pen section and threaded to said barrel, said cap having means associated therewith for engaging said ratchet portion to prevent accidental removal of said cap from said pen section.

6. A pen supporting section for fountain pens and the like comprising an inner member having threads thereon and flanged at one end thereof, a member telescoped and threaded over said inner member for manually gripping the pen section, and a collar member on said inner member intermediate said flange and said telescope member said collar member having notches therein

adapted to lock a pen protecting cap against accidental removal from said pen section.

7. In a fountain pen and the like, the combination of a barrel; a pen section comprising an inner member, a collar telescoped over said inner member and a sleeve member telescoped over said inner member in abutted relation to said collar member, said collar member having recesses therein; a pen and feed bar in said pen section; a pen protecting cap secured to said barrel to protect said pen; a clip on the exterior of said cap, and a movable portion on said pen cap adapted to be projected into the recesses in the collar to prevent accidental removal of the cap when said clip is attached to the side of a pocket.

8. In a fountain pen and the like, the combination of a barrel having threads thereon, a pen section adapted to receive a pen feed, said pen section having an inner flanged member made of hard rubber, a collar member telescoped over said inner member made of shrinkable material such as pyroxylin, said collar having recesses therein; a pen protecting cap threaded to said barrel; a clip secured to the cap, and a movable latch on said pen cap adapted to be projected into the recesses in the collar to prevent accidental unscrewing of the cap when said clip is attached to the side of a pocket.

9. In a fountain pen and the like, the combination of a barrel having threads thereon, a pen section adapted to receive a pen feed, said pen section having an inner member, a collar telescoped over said inner member, and a sleeve member telescoped over said inner member in abutting relation to said collar member, said collar member having recesses therein; and a pen protecting cap threaded to said barrel; a clip on said pen cap; and means on said pen cap beneath said clip adapted to be projected into the recesses in the collar to prevent accidental unscrewing of the cap when the clip is fastened over the side of a pocket to hold the fountain pen in the pocket.

10. A pen supporting section for fountain pens and the like, comprising an inner member having a flange at one end thereof, a collar abutting said flange having a plurality of ratchet portions thereon, said ratchet portions being formed by a cam-shaped semi-circular circumferentially inclined recess having radially extending stop faces at one side thereof.

11. In a fountain pen and the like, the combination of a barrel provided with threads adapted to be engaged by a pen protecting cap, a pen section having a tubular inner member formed of relatively non-shrinkable material adapted to receive a pen feed, a collar made of a relatively shrinkable material such as pyroxylin telescoped over said inner member, said tubular member and said collar forming a unitary structure, said collar having circumferentially spaced recesses on the outer surface thereof; and a pen protecting cap adapted to be threaded to said barrel; a clip on said cap; said cap having movable means thereon adjacent said clip, said movable means being adapted to be projected into said recesses in said collar to prevent accidental unscrewing of said cap when said clip engages a piece of material such as the wall of a pocket.

MILFORD GUY SYPHER.