June 21, 1949. L. P. MARTIN 2,473,688

CLIP FOR WRITING INSTRUMENTS

Filed Dec. 14, 1944

Fig. 1.

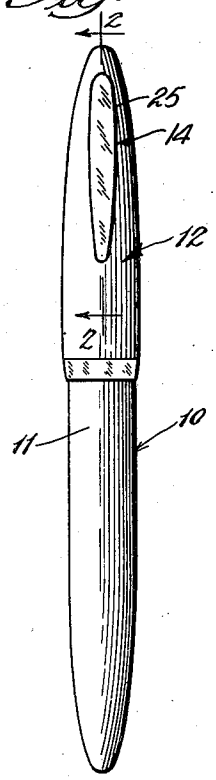


Fig. 2.

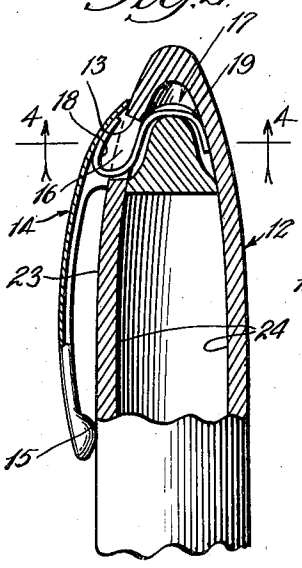


Fig. 3.

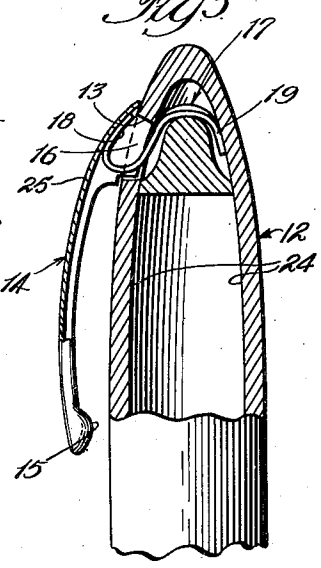


Fig. 5.

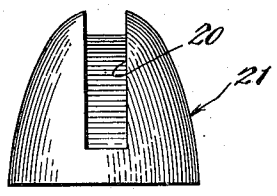


Fig. 4.

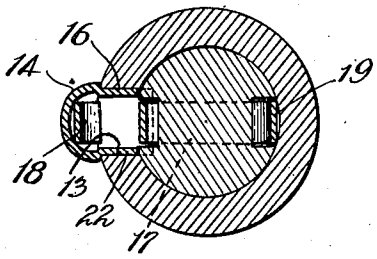
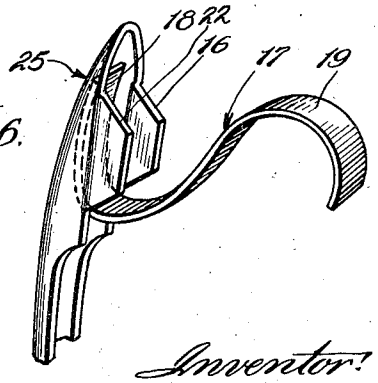


Fig. 6.



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CLIP FOR WRITING INSTRUMENTS

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6 Claims. (Cl. 24—11)

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This invention relates to a clip for a writing instrument or other elongated object and has special reference to a retaining means suitable for detachably engaging an article carried on the person such as a fountain pen, mechanical pencil, clinical thermometer or the like to a pocket.

More particularly, this invention relates to a clip for association with a slotted cap of a writing instrument in which the arm of the clip is disposed exteriorly of a wall of the cap, there being means on the arm extending through the slot of the cap with resilient means disposed interiorly of the wall of the cap yieldably maintaining the arm in an operative position with respect to the outer cap wall.

Heretofore the usual clips for writing instruments and the like have comprised an arm having one end thereof fixably secured to the cap of the writing instrument with the free end of the clip detachably holding between it and the cap the material of a pocket in which the writing instrument is held. The arm for detachably holding writing instruments ordinarily is resilient to permit a flexing in a direction to and away from the cap.

In articles such as fountain pens and mechanical pencils, and particularly those of higher quality, the findings, including the clip, are usually of gold plated or gold filled stock. So far the material giving the most resilience and therefore the best material adapted for use in detachably engaging the pocket or other element to which the writing instrument is to be detachably secured is steel, but difficulty is experienced in coating the steel with gold to obtain good wearing characteristics. Brass and silver alloys have been used for the most part on quality merchandise, but the resilient characteristics of these two materials are lacking compared to the resilient character of steel. The present invention, therefore, makes use of the desirable characteristics of both the silver or copper alloys which can be satisfactorily plated or filled with gold, and the steel which is used for its resilient characteristics.

Since there is some resiliency in the silver and copper alloys, the tension on the arm formed of these alloys is relieved by a spring formed of steel, the gold or copper alloys plated or filled with gold being mounted exteriorly of the cap and the steel spring member being mounted interiorly of the cap. The steel compensates for the comparative inelasticity of the arm to prevent the arm of the clip from being forced beyond its elastic limit.

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One of the objects of this invention is to provide a clip of the above noted type which is simple in construction and in operation, is comparatively inexpensive to manufacture, and is durable.

Another object of this invention is to provide a clip of the hereinabove mentioned type wherein an exteriorly disposed arm thereof is formed of a material of substantially rigid character and an interiorly disposed member is resilient to prevent the arm member exceeding its elastic limit in its operation to detachably engage the pocket or other portion of the user's apparel.

Other objects and advantages of this invention are hereinafter more particularly pointed out and for a more complete understanding of the characteristic features of this invention, reference may now be had to the following description when taken together with the accompanying drawing, in which latter;

Figure 1 is a front elevational view of a writing instrument having a clip mounted thereon embodying the features of this invention;

Fig. 2 is an enlarged fragmentary view of the cap and clip members showing a portion thereof in cross section;

Fig. 3 is a view similar to Fig. 2 showing a changed position of the clip member;

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2;

Fig. 5 is an enlarged front elevational view of the inner cap for positioning the resilient portion of the clip; and

Fig. 6 is a perspective view of the clip and the arm resilient members of the clip assembly showing a portion of the arm broken away.

Referring now more particularly to the drawing, a fountain pen 10 is shown comprising a barrel portion 11 and a cap portion 12, these barrel and cap portions being preferably formed of plastic, although any rigid or semi-rigid material may be used in place thereof. The cap and barrel portion are detachably secured together as by means of a friction fit, screw threads or the like. While a fountain pen is shown in the drawing, and will hereinafter be described in detail, still it is to be understood that this invention may be incorporated on a mechanical pencil, clinical thermometer or any writing structure or other device which is carried upon a person or thing in a detachable relation.

The cap 12 is slotted as at 13, the slot extending through the entire thickness of the material of the cap. An arm 14 is disposed exteriorly of the outer wall 23 of the cap, the arm

having a ball-pointed free end portion 15 which in a condition of rest bears against the outer wall 23 of the cap. The upper or other end 25 of the arm 14 is provided with a pair of ears 16 and 22 which are preferably formed integrally with the material of the arm and extend from the arm in a parallel, spaced-apart relation. The ears 16 and 22 extend through the slot 13 and guide the movement of the arm in a direction toward and away from the cap.

In order to provide tension against the movement of the arm 14 away from the wall of the cap and to hold the arm in its position of rest with the ball 15 bearing against the wall of the cap and the ears 16 and 22 extending through the slot 13, an S-shaped spring 17 is provided, one end 18 of the spring 17 being soldered or otherwise rigidly secured to the arm between ears 16 and 22, and the other end of the spring 17 forming a loop 19 to be received in the channel 20 of an inner cap 21. The inner cap or plug 21 is forced into the upper end of the cap and presses the loop 19 into engagement with the inner walls 24 of the cap to secure the spring 17 against displacement.

The inner cap or plug 21 is preferably formed of plastic and the outer surface of the inner cap may be provided with a solvent so that when it is moved into position shown in Fig. 2 the solvent will form a weld with the inner wall of the plastic cap and thus be held in position therein against displacement.

The clip 14 is preferably formed of a copper base alloy or a silver alloy, although a nickel silver or other similar material may be likewise used, such material having the characteristics of taking a satisfactory plate or fill of gold. Such an alloy has some resiliency but in a comparative sense lacks much of the resiliency of steel, as has been mentioned above. The spring 19 is strong enough to hold the arm 14 of the clip under substantial tension but is not strong enough to permit the arm 14 to flex beyond its elastic limits. However, should the arm 14 take a set the spring 17 would continue to hold the arm under tension so as to accomplish its function in permitting the instrument to be readily attached and detached in its position of storage.

The arm 14 may be substantially rigid and the full action of its movement toward and away from the cap may be accommodated by the spring 17. However, should there be some resiliency in the arm 14 after such resiliency has been taken up, the spring 17 will thereafter act to place the arm 14 under tension.

While but a single embodiment of this invention has been herein shown and described, it is to be understood that various modifications of the invention will hereafter be apparent to those skilled in the art, and therefore this invention is only to be limited by the prior art and the scope of the appended claims.

I claim:

1. The combination with a slotted cap of a writing instrument, of clip means comprising an arm disposed exteriorly of a wall of the cap, rigid means on said arm guided by and extending movably through said slot, and an S-shaped spring having a portion thereof disposed interiorly of the wall of said cap one end of said spring being fixed with respect to said interior wall and the other end being fixed to said arm for yieldably maintaining said arm in an operative position with respect to said outer cap wall.

2. The combination with a slotted cap of a writing instrument, of clip means comprising an arm disposed exteriorly of a wall of the cap, means on said arm extending through said slot, an S-shaped spring having a portion thereof disposed interiorly of the wall of said cap, one end portion of said spring extending through said slot and fixedly engaging said arm, an externally grooved plug fixedly engaged in the bore of said cap, the other end portion of said spring engaging said groove and held in position thereby for yieldably maintaining said arm in an operative position with respect to said outer cap wall.

3. The combination with a slotted cap of a writing instrument, of clip means comprising an arm disposed exteriorly of a wall of said cap, a rigid projection on said arm guided by and extending movably through the slot of said cap, and resilient means having a portion thereof secured within the interior of said cap and another portion extending through said slot fixedly connected to said arm for yieldably maintaining said arm in an operative position with respect to said outer cap wall.

4. The combination with a slotted cap of a writing instrument, of clip means comprising a rigid arm disposed exteriorly of a wall of said cap, a rigid projection on said arm guided by and extending movably through the solt of said cap, and resilient means having a portion thereof secured within the interior of said cap and another portion extending through said slot fixedly connected to said arm for yieldably maintaining said arm in an operative position with respect to said outer cap wall.

5. The combination with a slotted cap of a writing instrument, of clip means comprising an arm disposed exteriorly of a wall of said cap, means on said arm guided by and extending movably through said slot, an S-shaped spring having a portion thereof disposed within the interior of said cap, one end portion of said spring extending through said slot and being fixedly connected to said arm, and rigid means fixing that portion of said spring disposed within the interior of the cap against displacement therefrom whereby said arm is yieldably maintained in an operative position with respect to said outer cap wall.

6. The combination with a slotted cap of a writing instrument, of clip means comprising an arm disposed exteriorly of a wall of said cap, means on said arm guided by and extending movably through said slot, an S-shaped spring having a portion thereof disposed within the interior of said cap, one end portion of said spring extending through said slot and being fixedly connected to said arm, and a plug fixing that portion of said spring disposed within the interior of the cap against displacement therefrom whereby said arm is yieldably maintained in an operative position with respect to said outer cap wall.

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