

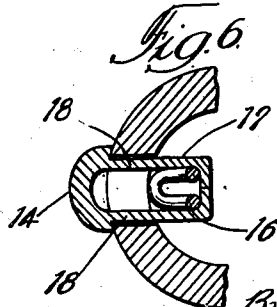
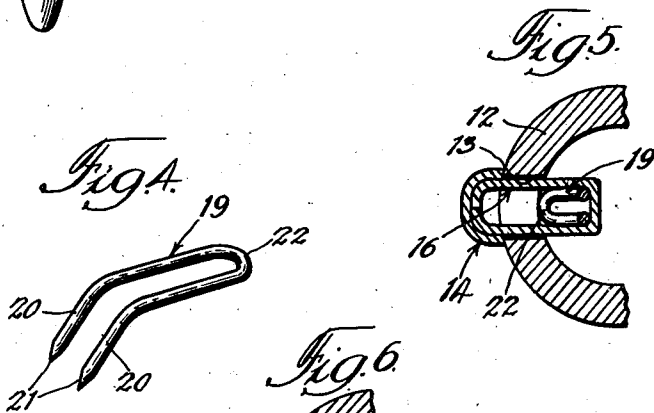
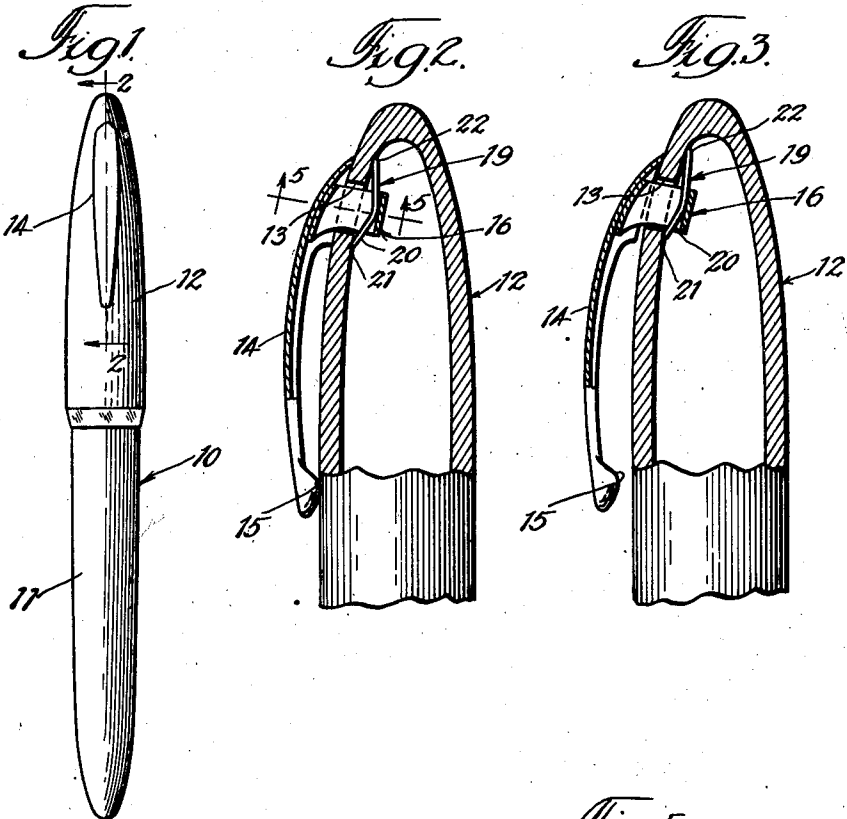
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CLIP FOR WRITING INSTRUMENTS

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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 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 or the like in which the arm of the clip is disposed exteriorly of a wall of a 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, and engaging the extending means for yieldably maintaining the arm in an operative position with respect to the exterior wall of the cap.

It is usual in clips for writing instruments and the like to provide an arm with one end thereof fixably secured to the cap of the writing instrument and the free end thereof detachably holding between it and the cap the material of a pocket or the like in which the writing instrument is held. The arm for detachably holding the writing instrument 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. To the best of my knowledge steel is the material which gives the most resiliency and is therefore particularly well suited for use in detachably engaging the pocket or other element to which the writing instrument is to be detachably secured. However, difficulty is experienced in coating the steel with gold or other precious metal to obtain good wearing characteristics. Brass and silver alloys form the best base for gold and are used for the most part on quality merchandise, but the resilient characteristics of these two materials are not as satisfactory as those of steel. The present invention, therefore, makes use of the desirable characteristics of the silver or copper alloys, which alloys can be satisfactorily plated or filled with gold and makes use of the better qualities of steel so far as its resilient characteristics are concerned.

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 silver 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. In this association the steel compensates for the comparative inelasticity of the arm to prevent the arm of the clip from being flexed beyond its

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elastic limit and the brass or silver alloys compensate for the poorer quality of steel as a base for precious metals.

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 material of a substantially rigid character and an interiorly disposed member is resilient to prevent the arm member, exceeding its elastic limits in its operation to detachably engage the pocket or other portion of the user's apparel.

Other objects and advantages of this invention will hereinafter be 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 an enlarged perspective view of the spring for the clip member;

Fig. 5 is a fragmentary sectional view taken on the line 5-5 of Fig. 2; and

Fig. 6 is a view similar to Fig. 5 showing a modification of the clip construction.

Referring now to the other drawings and more particularly to Figs. 1 to 5, inclusive, thereof, a fountain pen 10 is shown comprising a barrel portion 11 and a cap portion 12, the barrel and cap portions being shown as of plastic material, although a precious metal or various other materials of rigid or semi-rigid character 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, as is generally practiced in the art. While a fountain pen is shown in the drawing and will hereinafter be described in detail still it should be understood that this invention may be incorporated in a mechanical pencil, a 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 wall of the cap, the arm having a rounded or substantially ball-pointed free end portion 15 which in a condition of rest bears against the outer wall of the cap. The other end of the arm 14 is of channel shape and enlarged with respect to the free end portion to receive a box-shaped member 16, the box-shaped member being soldered or otherwise fixably secured to the arm within the channel formation thereof. The box-shaped member extends through the slot 13 from the arm 14, terminating interiorly of the cap.

The member 16 is formed of a strip of material preferably of the same base material as that of the arm 14, and free ends of the strip abutting within the channel of the arm 14 and being soldered together with the arm 14 in the same operation. Referring more particularly to Fig. 6 of the drawing, the box-shaped portion 17 instead of being formed separately as in Fig. 5, of a strip of material, is formed integrally with the arm 14, ears 18 of a reduced thickness extending from the arm through the slot 13 in a parallel spaced-apart relation with the free ends of the ears being bent at right angles to each other interiorly of the cap to an abutting relation. The ears 18 formed integrally with the arm 14 form a box the same as the box-like member 16 formed by a strip of material soldered to the arm, and in both instances guide the movement of the arm 14 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 to hold the arm resiliently in its position of rest with the ball 15 bearing against the wall of the cap and the box-like member extending through the slot 13, a spring 19 in the shape substantially of a staple is provided, the legs 20 of the spring 19 preferably having sharp pointed ends 21. The spring 19 is bowed over an intermediate portion between the pointed ends of the legs and the closed end portion 22 thereof, the pointed ends piercing the material of the cap when in position within the box-like member 16 to hold the spring against displacement, the closed end 22 of the spring being free to ride against the inner wall of the cap when the spring is flexed in the operation of the clip, which will now be described.

When in position in the cap the spring 19 has its bowed intermediate portion bearing against the inner end of the box-like member 16. The pointed end prevents displacement of the spring from its original position and movement of the arm 14 in a direction away from the exterior wall of the cap depresses the bowed portion and provides tension thereby to resist the movement of the arm 14 in a direction away from the cap. Since the pointed ends of the spring are fixed, the expansion in a longitudinal direction of the spring as it is compressed by the action of the arm is accommodated by the movement of the free rounded end 22 of the spring in its movement upwardly in the cap against the inner wall thereof.

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 a material having the characteristics of taking a satisfactory plate or fill of a precious metal such as gold. The copper base or silver alloy has some resiliency but in a comparative sense lacks much of the resiliency of steel, as has been mentioned above. 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 two embodiments of this invention is herein shown and described, it is to be understood that various modifications of the invention will hereinafter be apparent to those skilled in the art, and therefore this invention is to be limited only by the prior art and scope of the appended claims.

I claim:

1. The combination with a slotted cap of a writing instrument or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, a rigid projection on said arm extending through said slot, said rigid projection having an angularly extending portion spaced from the inside wall of said cap and resilient means engaged between said angularly extending portion and said cap wall for yieldably urging said arm against said exterior wall.

2. The combination with a slotted cap of a writing instrument or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, a rigid projection on said arm extending through said slot, said rigid projection having an angularly extending portion spaced from the inside wall of said cap and an arched resilient member engaged between said angularly extending portion and said cap wall at an intermediate portion of said member for yieldably urging said arm against said exterior wall.

3. The combination with a slotted cap of a writing instrument or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, a box-shaped member extending from said arm through said slot, and an arched resilient member disposed interiorly of the wall of said cap and extending through said box-shaped member, one end of said resilient member being fixed and the other end being movable relative to the interior wall of said cap, and an intermediate portion of said resilient member engaging a portion of said box-shaped member for yieldably urging said arm against said exterior wall.

4. The combination with a slotted cap of a writing instrument or the like, of clip means comprising a rigid arm disposed exteriorly of a wall of the cap, a box-shaped member formed integrally with said arm and extending through said slot, and an arched resilient member disposed interiorly of the wall of said cap and extending through said box-shaped member, one end of said resilient member being fixed and the other end being movable relative to the interior wall of said cap, and an intermediate portion of said resilient member engaging a portion of said box-shaped member for yieldably urging said arm against said outer cap wall.

5. The combination with a slotted cap of a writing instrument or the like, of clip means comprising a rigid arm disposed exteriorly of a

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wall of the cap, a box-shaped member formed integrally with said arm and extending through said slot, and a U-shaped arched resilient member disposed interiorly of the wall of said cap and extending through said box-shaped member, the open ends of said resilient member being sharp to engage fixedly said inner wall and the other end being movable relative thereto, and an intermediate portion of said resilient member engaging a portion of said box-shaped member for yieldably urging said arm against said outer cap wall.

6. The combination with a slotted cap of a writing instrument or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, a box-shaped member extending from said arm through said slot, and a U-shaped arched resilient member disposed interiorly of the wall of said cap and extending through said

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box-shaped member, the open end of said resilient member being fixed and the other end being movable relative to the interior wall of said cap, and an intermediate portion of said resilient member engaging said box-shaped member for yieldably urging said arm against said outer cap wall.

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