

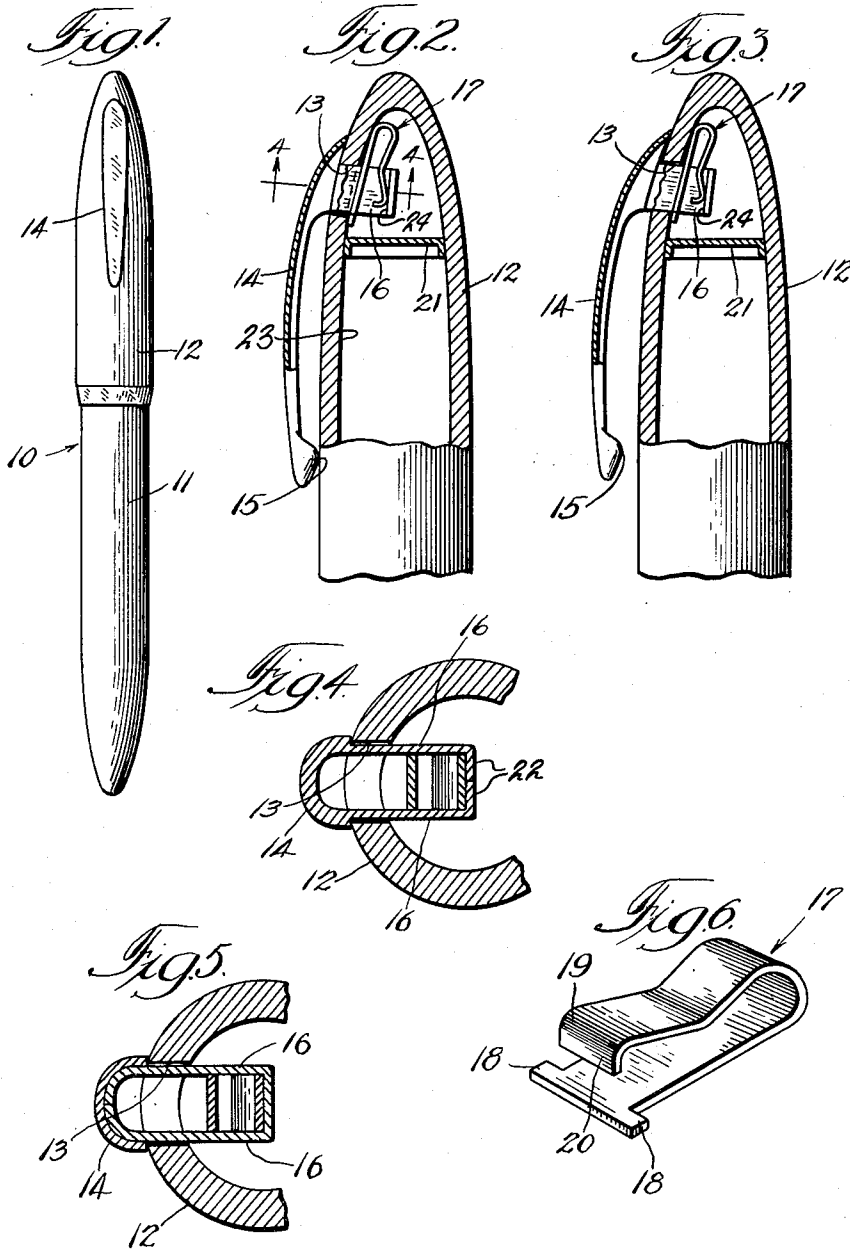
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CLIP FOR WRITING INSTRUMENTS

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CLIP FOR WRITING INSTRUMENTS

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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 in which the arm of the clip is disposed exteriorly of a wall of the clip, there being means on the arm of the clip 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. The resilient means of this invention comprises preferably a substantially U-shaped spring having one end bearing against the wall of the cap and the other end bearing against the extending means.

Heretofore the usual clips for writing instruments or the like have comprised a resilient 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, being resilient, permits a flexing thereof in a direction to and away from the cap to hold and to release, respectively, the material of the pocket held between the clip and the cap.

In articles such as fountain pens, mechanical pencils, clinical thermometers and the like, and particularly those items of higher quality, the various findings employed, which findings include the clip, are usually of gold filled stock. In commercial use today the material having inherently the better resilience and therefore the material which is best adapted for use in the performance of its function to detachably engage the pocket or other means on the person to which the writing instrument is to be secured is steel. However, difficulty has been experienced in obtaining a coating or plating on the steel with materials such as gold in order to obtain good wearing characteristics. Brass and silver alloys have been used for the most part on quality merchandise but the resilient characteristics of either of these two minerals or other like materials are decidedly lacking when 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 gold filled and the steel which is more satisfactory for its resilient characteristics.

Since there is some resiliency in the silver and copper alloys, even though they are of compara-

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tively heavy stock to form a substantially rigid arm the tension on the arm formed of these alloys is relieved by the spring formed of steel, the arm comprised of silver or copper alloys filled with gold being mounted exteriorly of the cap and the steel spring member being mounted interiorly of the cap. The steel spring compensates for the comparative inelasticity of the arm to prevent the arm of the clip from being forced beyond its elastic limits.

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 therefor is formed of a 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 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 a view similar to Fig. 4 showing a modified form of clip construction; and

Fig. 6 is a perspective view of the spring comprising a component part of the clip member.

Referring now more particularly to the drawing, a fountain pen 10 is shown comprising a barrel portion 11 and a cap portion 12, the barrel and cap portions being preferably formed of plastic, although any rigid or semi-rigid material may be used therefor. The cap and barrel portions are detachably secured together as in the usual manner 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 in a mechanical pencil, clinical thermometer or any writing structure or other device which is carried upon a person or thing in a detachable relation.

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The cap 12 is slotted as is 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 substantially ball pointed free end portion 15 which in a condition of rest bears against the outer wall of the cap. The upper or other end of the arm 14 is provided with a pair of ears 16 which are preferably formed integrally with the material of the arm and extend therefrom in a parallel spaced-apart relation. The ears 16 extend through the slot 13 and axially guide the movement of the arm in a direction toward and away from the cap.

The outer ends 22 of the ears 16 are bent inwardly in a direction toward each other to form a box-shaped strap. Referring to Fig. 4 the ears 16 have been shown as being formed integrally with the arm 14 whereas in Fig. 5 the ears 16 are shown as being formed separately from the arm. In the latter instance the box-shaped strap is secured at one end thereof within and to the inside of the arm by soldering, welding or the like.

In order to provide tension against the movement of the arm 14 away from the outer wall of the cap and to movably hold the arm in its position of rest with the ball 15 bearing against the wall of the cap and the ears 16 extending through the slot 13, a substantially U-shaped spring 17 is provided, one end of the spring bearing against the inner wall 23 of the cap and the other end bearing against the inner wall 24 of the end of the strap. In the normal position of rest of the arm, the U-shaped spring 17 is held under compression and movement of the arm 14 outwardly from the outer wall of the cap increases the compression of the spring 17.

One end of the spring 17 is provided with sharp extending portions 18 and the other end of the spring is provided with a rounded offset portion 19, the extending portions 18 position the spring with respect to the cap and the rounded offset portion 19 bears against the inner wall of the end of the strap. A depending portion 20 extending from the rounded offset portion 19 limits the movement of the spring and thereby the arm 14 in one direction by contact of the end of the depending portion with an adjacent portion of the spring.

An inner cap 21, preferably formed of a flanged disc is disposed interiorly of the cap to seal off the slot 13 in order that the pen nib and fluid-feeding portions of the fountain pen housed in the open end of the cap may be sealed apart from the atmosphere. The inner cap is preferably formed of plastic material and is preferably held in position within the ball of the cap 12 by providing a solvent on the exterior surface of the flange thereof so that when the inner cap is moved into position as 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 of a silver alloy although a nickel silver or other similar material may be likewise used, such materials having the characteristics of taking a satisfactory fill or plate of gold. The above mentioned alloys have some resiliency but in a comparative sense lack the resiliency of steel as has been previously mentioned. The spring 12 is strong enough to hold the arm 14 of the clip under a 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

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arm under tension so as to accomplish its function in permitting the instrument to be readily attached and detached from the pocket.

The arm 14 may be substantially rigid and the full action of its movement toward and away from the cap 12 may be accommodated by the spring 17. However, should there be some resiliency in the arm 14, then 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 is herein shown and described, it is to be understood that various modifications of the invention will be apparent to those skilled in the art without departing from the spirit and scope of the invention and therefore the same is to be limited only by the scope of the prior art and the appended claims.

We 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, and resilient means comprising a substantially U-shaped spring having one end engaging the interior wall of said cap and the other end engaging said rigid projection 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 or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, means on said arm extending through said slot, and a U-shaped spring disposed interiorly of the wall of said cap, one end of said spring having laterally extending portions for engagement with the inner wall of said cap to fix the spring with respect thereto and the other end engaging said extending means 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 or the like, of clip means comprising an arm disposed exteriorly of a wall of the cap, a box-shaped strap on said arm extending through said slot, a U-shaped spring disposed interiorly of the wall of said cap within said strap, one end of said spring having sharp extending portions bearing against the inner wall of said cap and the other end bearing against said strap for yieldably maintaining said arm in an operative position with respect to said outer cap well.

4. 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 strap on said arm extending through said slot, a U-shaped spring disposed interiorly of the wall of said cap within said strap, one end of said spring bearing against the inner wall of said cap, the other end of said spring extending inwardly toward said first mentioned end of said spring for yieldably maintaining said arm in an operative position with respect to said outer cap well and for limiting the movement of the arm in a direction outwardly of said outer wall.

5. 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 strap on said arm extending through said slot, a U-shaped spring disposed interiorly of the wall of said cap within said strap, one end of said spring bearing against

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the inner wall of said cap, the other end of said spring having an off-set portion for bearing against said strap for yieldably maintaining said arm in an operative position with respect to said outer cap well, a depending portion on said off-set portion limiting the movement of said spring and thereby said arm in one direction by contact with an adjacent portion of said spring.

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