Nov. 15, 1949 H. A. BAUER 2,488,114

CLIP FOR MECHANICAL PENCILS, FOUNTAIN PENS, AND THE LIKE

Filed May 13, 1944

Fig. 1.

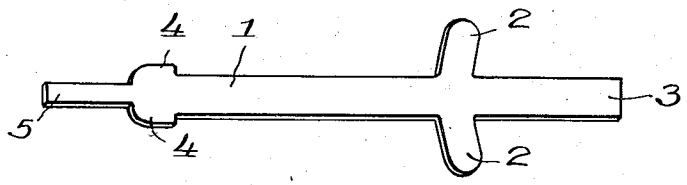


Fig. 2.

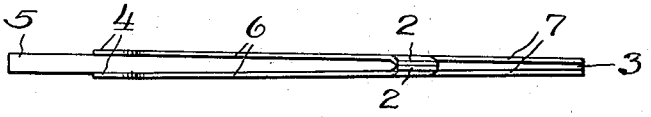


Fig. 3.

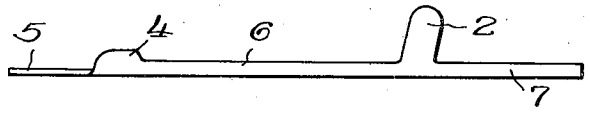
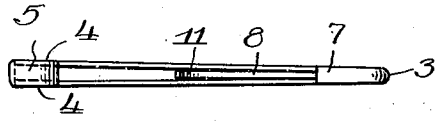


Fig. 5.



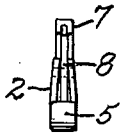


Fig. 6.

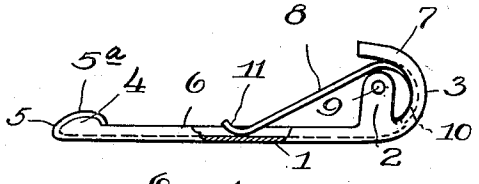


Fig. 4.

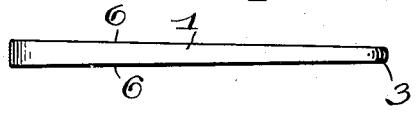
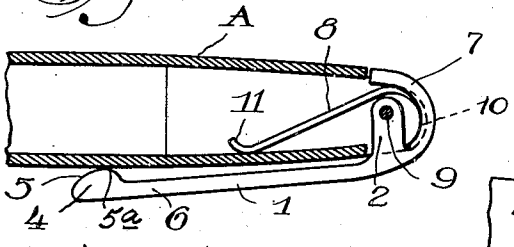


Fig. 7.

Fig. 8.



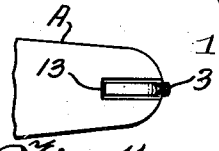


Fig. 11.

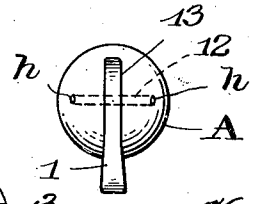


Fig. 10.

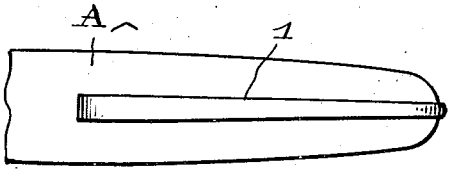


Fig. 9.

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Patented Nov. 15, 1949

2,488,114

UNITED STATES PATENT OFFICE

2,488,114

CLIP FOR MECHANICAL PENCILS, FOUNTAIN PENS, AND THE LIKE

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Application May 13, 1944, Serial No. 535,426

5 Claims. (Cl. 24—11)

1

This invention relates to a clip for mechanical pencils, fountain pens and the like. Among the objects of the present invention is to provide a clip of the class described which is economical to manufacture, efficient in operation, easy to assemble and free of projections that might damage the material to which the pen, pencil or the like is to be attached.

Another object is to provide a clip that is simple in construction, and one that requires only a small amount of metal in its manufacture.

A further object is to make possible a clip that gives a positive gripping action, and yet readily yields when forced over the material to which it is to be attached, such as a pocket or the like.

A still further object is to provide a clip requiring only a small length of spring material, and a novel manner of affixing the spring to the clip proper and positioning the spring within the cap or hollow end of the mechanical pencil, fountain pen and the like.

An additional object is to provide a clip that requires no manipulation by the operator's fingers to operate, but may be safely and easily applied to the goods of the user's pocket by a simple push, or removed therefrom by a simple pull, without damage to said goods.

Another object is to provide a novel arrangement of fulcrum, and a novel manner of disposing the spring within the hollow of a fountain pen cap, or hollow end of a mechanical pencil, or the like.

Other objects, advantages and capabilities, inherently possessed by my invention, will later more fully appear.

My invention further resides in the combination, construction and arrangement of parts illustrated in the accompanying drawings, and while I have shown therein a preferred embodiment, I wish it understood that the same is susceptible of modification and change without departing from the spirit of my invention.

In the drawings:

Fig. 1 is a perspective view looking toward one face of a blank from which the exterior portion of my clip is made, and before the same is bent into shape.

Fig. 2 is an edge view of the under side of the blank of Fig. 1 when only partly bent to shape.

Fig. 3 is a side elevation of Fig. 2.

Fig. 4 is a side elevation (partly in section) of the clip after being bent into final shape and assembled with the spring, but before being attached to the mechanical pencil, fountain pen or the like.

2

Fig. 5 is an edge view looking down on Fig. 4.

Fig. 6 is an end view looking toward the left hand end of Fig. 4.

Fig. 7 is an edge view looking up toward the bottom of Fig. 4.

Fig. 8 is a longitudinal sectional view on a median plane through a fragmentary portion of a mechanical pencil, fountain pen cap or the like, and showing the clip and spring in side elevation.

Fig. 9 is an elevation of the fragment shown in Fig. 8 and looking toward the edge of the clip.

Fig. 10 is an end view looking toward the right hand end of the fragment of Fig. 8.

Fig. 11 is a fragmentary view in elevation of the end of the mechanical pencil, fountain pen cap or the like disclosed in Fig. 9 but showing the opposite side thereof.

Referring in detail to the drawings the exterior or major portion, of my clip 1 is made from a blank of thin metal, shown in Fig. 1. This blank comprises a shank having on each side near one end a pair of fulcrum ears 2, a tail piece 3, a pair of oppositely extending flanges 4 and a forwardly extending strip 5 which with flanges 4 forms the curved rise 5a of the clip. Figs. 2 and 3 show the blank of Fig. 1 after a portion of each longitudinal edge area has been bent upwardly at approximately right angles to form two opposite side flanges 6 which carry upwardly the two fulcrum ears 2 into approximately parallel position, and the two flanges 4 upwardly into approximately parallel position. The rear, upstanding, approximately parallel side flanges 7 are continuations of the side flanges 6 except for the interruption of the fulcrum ears. The side flanges 7 are spaced apart a sufficient distance laterally to receive the rear end portion of the wire spring 8 as explained later.

The tail 3 together with its spaced flanges 7, is curved upwardly into the arcuate formation shown in Figs. 4 and 8. Also the forward strip 5 is bent around the edges of the flanges 4 as shown in Fig. 4, or may be bent to lie between these flanges and flush with their edges, if desired, as shown in Fig. 8. The free ends of the fulcrum ears 2 are formed with fulcrum pintle holes 9, one in each.

The wire spring 8 is either now, or earlier if desired, bent into the shape shown in Figs. 4 and 8, to have the arcuate rear end 10 and the curved forward nose 11. The arcuate rear end 10 of the wire spring is then positioned in the groove or space between the tail flanges 7, which flanges are then bent or forced toward each other to grip or pinch the curved end 10 of the wire spring

firmly therebetween so that curved end 10 will be fixed against any longitudinal sliding between the pinched flange 7. The wire spring is so shaped that when it is inserted into the pen or pencil cap or hollow end, as shown in Fig. 8, it will contact the inner surface thereof and exert the desired amount of tension to normally hold the curved rise or portion of the clip shank against the outer surface of the cap or pencil body and yet be movable away therefrom to permit it to pass over the material of a pocket or the like to which it is to be secured with a gripping action.

In assembling the clip with the pen cap, pencil body or the like A, which will have lateral alined openings, *h*, to receive the fulcrum pin 12 and a longitudinally extending arcuate slot 13, the arcuate tail 3, 7 is slipped into the slot 13 with the spring 8 positioned under tension within the hollow body A, and the fulcrum pin 12 is then pushed through the alined holes *h* and 9 and riveted at the ends or otherwise permanently or temporarily secured thereto as desired.

From the above it will be seen that the clip is fulcrumed on the pin 12 and the arcuate tail 3, 7 will have a slight rotation in the slot 13 longitudinally of the slot as the clip is opened and closed. The spring 8, which may be a wire, a flat resilient strip, or other suitable resilient material as desired, will be under sufficient tension to hold the curved rise 5*a* of the clip against the hollow body A with the desired pressure and permit its movement outwardly therefrom. This construction permits easy removal and replacement of the parts, and provides a clip free of undesirable projections and complicated parts. Applicant's novel clip is truly a "stream lined" clip.

Having thus described my invention, I claim:

1. A clip for a hollow body such as a mechanical pencil, fountain pen and the like having a slot extending across the end of the body, comprising a substantially rigid shank to be positioned longitudinally along the exterior of the hollow body and having a rounded end adapted to be pressed against said exterior and an arcuate tail piece to be mounted within the slot, and a spring member having one end curved in substantial conformity with said tail piece and connected thereto and the other end adapted to extend longitudinally within and press against the interior of the hollow body inwardly of the rounded end of the shank.

2. A clip for mechanical pencils, fountain pens and the like having a hollow body and a slot extending transversely across the end thereof, comprising a substantially rigid shank extending along the exterior of the hollow body and having a tip adapted to be pressed against the exterior and a tail piece conformably received in the transverse slot, a spring member disposed within the hollow body for pressing the tip against the exterior of the body, said spring member being anchored at one end to the tail piece and its other end extending longitudinally within the hollow body and pressing against the interior thereof, and means for pivotally mounting the tail piece in the slotted end.

3. A clip for a hollow body such as a mechanical pencil, fountain pen and the like having a diametrically arranged slot in the end of the body, comprising a substantially rigid shank having a curved tip at one end adapted to engage the exterior of the body, an arcuate tail piece at the other end adapted to be mounted within the slot and a part adjacent the tail piece providing a fulcrum for pivotally mounting the clip in the slotted end of the body, a spring having a curved part at one end carried in the tail piece and the other end adapted to be positioned within and press against the interior of the hollow body, and a transverse pin extending through the part on the tail piece and adapted to extend across the slot to provide a pivotal mounting for the clip in the hollow body.

4. In combination, a hollow cap for a mechanical pencil, fountain pen and the like closed at one end except for a slot formed therein and extending across the cap, a clip having an elongated substantially rigid shank disposed longitudinally along the exterior of the cap and provided with a tip adapted to press against the exterior, said clip having an arcuate tail piece at its other end mounted within the slot and forming a continuation of the shank, a fulcrum pin carried by the cap and extending laterally across the slot and thereat providing a pivotal mounting for the tail piece, and a spring disposed interiorly of the cap and anchored at one end to the arcuate tail piece and with its other end pressing against the interior of the cap in substantial alignment with the shank and continuously urging the clip rotationally in a direction to cause the tip of the shank to press against the exterior surface of the cap.

5. In combination, a hollow cap for a mechanical pencil, fountain pen and the like closed at one end except for a slot formed therein and extending across the end of the cap, a clip having an elongated shank disposed along the exterior of the cap and provided at one end with a tip adapted to press against the exterior and at the other end provided with a tail piece conformably seating within the slot, a spring disposed within the cap and anchored at one end to the tail piece and with the other end continuously pressing against the interior surface of the cap inwardly of the aforementioned position of the shank and tip, and means for pivotally anchoring the tail piece of the clip within the slotted end of the cap, said spring continuously urging the clip rotationally about the pivotal anchoring means and in a direction to cause the tip of the shank to tend to press against the exterior surface of the cap.

HANS A. BAUER.

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