

May 28, 1929.

J. C. WAHL

1,714,744

PENCIL CLIP

Original Filed April 12, 1924

Fig. 1.

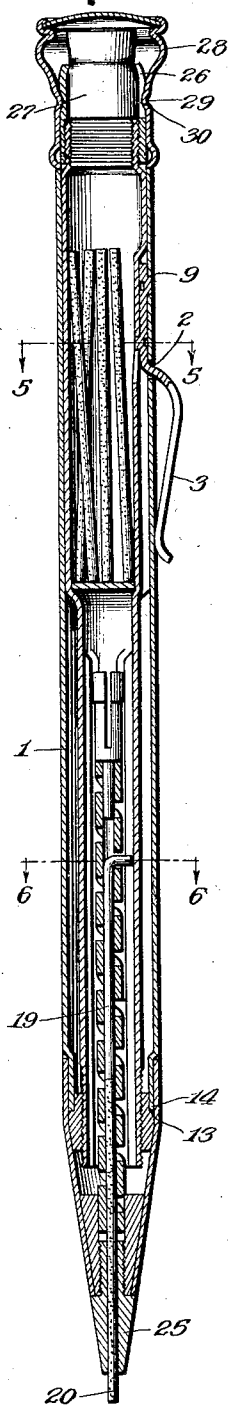


Fig. 2.

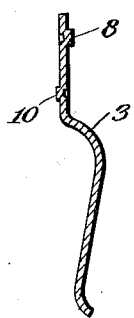


Fig. 3.

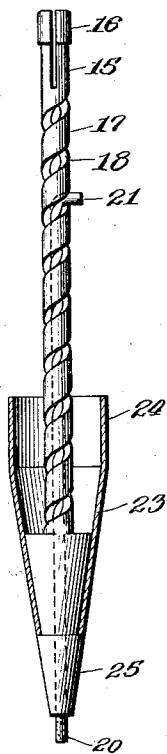


Fig. 4.

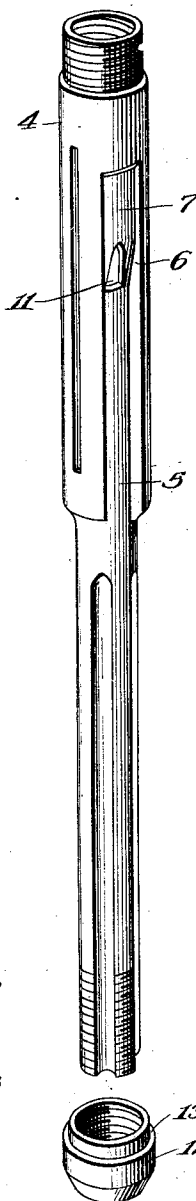


Fig. 5.

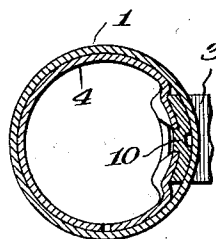
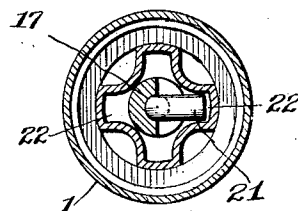


Fig. 6.



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PENCIL CLIP.

Original application filed April 12, 1924, Serial No. 705,979. Divided and this application filed January 7, 1927. Serial No. 159,512.

This invention is a clip adapted for a mechanical pencil and serves the purpose of securing the pencil in the pocket of the user.

This application is a division of my application Serial No. 705,979 which was filed April 12, 1924.

One of the objects of this invention is to provide a pencil clip which will have the necessary pocket gripping characteristics and which may be easily and economically secured to a mechanical pencil.

Another object of this invention is to provide a pencil clip having means for attaching it to a pencil, the said means also cooperating with other features of the pencil to hold a part of the lead feeding mechanism in position within the pencil.

Another object of the invention is to provide a pencil clip for a mechanical pencil which may be quickly and economically assembled with the pencil at the same time locking and being locked by a cooperating shell which holds it rigidly in position within the pencil barrel.

Further objects, advantages and capabilities will later appear and are inherently possessed by the invention.

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.

Referring to the drawings:—

Fig. 1 is a central longitudinal section of the mechanical pencil equipped with this pencil clip.

Fig. 2 is a central longitudinal section of the pencil clip itself.

Fig. 3 is a side elevation with a small portion in section showing part of the feeding mechanism that is associated with the structure assembled along with the pencil clip.

Fig. 4 is a perspective of the shell which is insertable within the pencil barrel, the lower part of this figure being a collar which cooperates with the shell.

Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 1.

Fig. 6 is a transverse sectional view taken on the line 6—6 of Fig. 1.

Referring now in greater detail to the drawings, a pencil barrel 1 is provided with an aperture 2 through which the pencil clip 3 extends. After this spring clip 3 has been inserted through the aperture 2 the shell generally indicated as 4 is then inserted at the top end of the pencil with the groove 5 registering with the inner portion of the pencil clip. As the shell is further inserted the upper end of the pencil clip will strike the inclined surface 6 and ride up onto the surface 7. The shell is so designed that the surface 7 will press the pencil clip firmly against the inner surface of the barrel and cause the projection 8 on the pencil clip to extend into a corresponding recess or aperture 9 which is provided in the pencil barrel. At the same time, while the shell is being inserted the projection 10 rides into the aperture 11 and engages the upper and small portion of that aperture to prevent further downward movement of the shell 4. In this manner the clip is snugly held in position against the inner wall of the barrel.

The collar generally indicated as 12 is then screwed on to the lower end of the shell and the circumferential shoulder 13 is brought to rest against the lower end 14 of the pencil barrel. By means of the collar 12 urging the shell downwardly and the projection 10 on the pencil clip holding the shell against further downward movement the shell is locked in a stationary position. Furthermore, by engagement of the projection 10 with the aperture 11 together with the engagement of the projection 8 with the aperture 9 the shell is held firmly against rotation within the pencil barrel.

The structure shown in Fig. 3 may next be inserted into the shell, a spring portion 15 having an expanded end 16 providing a frictional grip upon the inner surface of the shell to hold the lead propelling device against withdrawal from the shell. The shell 17, having a helical groove 18, drives a lead propeller 19 which feeds the lead 20.

The upper end of the lead propeller is provided with a bent portion 21 which extends into a groove 22, or guideway which is a part of the shell 4. A shell 23 having a flange 24 which surrounds the lower end of the pencil barrel is suitably connected with a tip 25 through which the lead 20 may be extruded. The member 17 is suitably connected to the shell 23 and is rotatable therewith.

The feeding of the lead is accomplished by rotating the shell 23, which causes the member 17 to rotate, the helical groove 18 acting in conjunction with the guideway 22 to cause the plunger, or lead propeller 19 to advance the lead.

An eraser holder 26 may be attached in any suitable manner to the shell 4, for instance as by the threads illustrated and will retain an eraser 27. If desired a cap 28 may then be placed over the end of the eraser holder to protect the eraser. In order to hold the cap 28 on the eraser holder a circumferential depression 29 is provided in the cap and cooperates with a corresponding groove 30 in the eraser holder.

This manner of securing the pencil clip to the pencil eliminates the necessity of solder and facilitates rapid and economical assembly. At the same time the pencil clip

performs the useful function of holding the inner shell 4 in a desired position for the purposes set forth above.

Having shown and described my invention, I claim:

1. In a mechanical pencil, a clip, a barrel having an aperture through which the clip protrudes, a projection on the clip, said barrel having a second aperture spaced apart from said first mentioned aperture for engaging said projection, a shell insertable within the barrel and having a groove portion engageable with a portion of the clip to clamp the clip in operative position, said shell having an aperture, and a projection on said clip for engaging said aperture.

2. In a mechanical pencil, a clip, a barrel having an aperture through which the clip protrudes, a projection on the clip, a shell insertable into the barrel and having a surface contacting with a portion of the clip to clamp the clip in operative position, a part of said surface being inclined and having an aperture for engaging the said projection as the shell is being inserted, to limit the motion of the shell relative to the clip.

In witness whereof, I hereunto subscribe my name to this specification.

JOHN C. WAHL.