April 18, 1944. W. R. WILSON 2,347,144

DISPLAY PENCIL

Filed Nov. 1, 1940



Fig. 1.

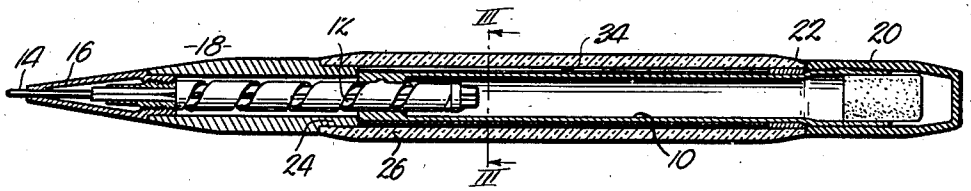


Fig. 2.

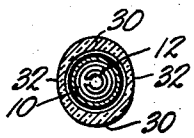


Fig. 3.

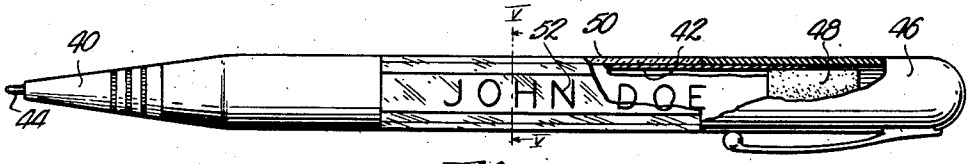


Fig. 4.



Fig. 5.



Fig. 6.

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DISPLAY PENCIL

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Application November 1, 1940, Serial No. 363,830

2 Claims. (Cl. 40—19)

This invention relates to improvements in screw pencils wherein the lead may be advanced and retracted by relative righthand and left-hand rotation of the propelling mechanism.

The principal object of this invention is the provision of a screw pencil having a barrel with indicia produced on the outer surface thereof, and a transparent housing member covering said indicia whereby they are magnified when viewed through the transparent housing member.

Another object of the present invention is the provision of a screw pencil having a transparent body member and a barrel member mounted for relative movement within said housing, and indicia carried on the outer surface of said barrel, visible through the transparent body member which is of varying thickness throughout its circumference.

A further object of this invention is the provision of a screw pencil having a barrel carrying indicia on its outer surface, and a magnifying, transparent housing covering said indicia and movable relative thereto.

With these objects as well as others which will appear during the course of the specification in view, reference will now be had to the drawing wherein:

Figure 1 is an elevational view of a pencil embodying this invention.

Fig. 2 is a longitudinal sectional view of the pencil.

Fig. 3 is a cross sectional view of the pencil taken on line III—III of Fig. 2.

Fig. 4 is an elevational view of a modified form of the pencil.

Fig. 5 is a cross sectional view taken on line V—V of Fig. 4; and

Fig. 6 is a modified form showing a circular form of the transparent cover member.

Throughout the several views, like reference characters designate similar parts and the numeral 10 denotes a pencil barrel in which is mounted carriage 12, having means whereby it is moved toward the lead end of the pencil as the barrel is rotated, and a lead 14 carried by the carriage and adapted to be extended through the tip 16, which is removably secured to an outer housing 18.

The outer end of the barrel is closed by a cap 20 which extends over the barrel body to present a shoulder 22.

Housing 18 comprises an end portion 24 on which is securely attached a transparent body member 26, which extends over the barrel 10 and butts against shoulder 22. An annular ring carried inside the outer end portion of transparent body member 26, serves as an outer bearing for the barrel, and as cap 20 is rotated while the body member is held stationary, the lead will be moved lengthwise of the barrel to extend through tip 16.

It will be noted that the lead operating mechanism in the barrel, just described, is of the common type now in general use. Any of the other screw type pencils in which the lead is propelled or repelled by relative rotation of the tubular parts, might be substituted for the particular part shown.

The principal novel feature associated with this screw pencil, is the provision of indicia 28 carried on the outer face of the barrel 10 beneath the transparent body 26, whereby the indicia will be visible through transparent body 26 and may be rotated relatively thereto.

Due to the curvature of the outer surface of member 26, the indicia will be magnified when viewed through member 26. When member 26 is slightly elliptical in form, as shown in Fig. 3, the degree of magnification of the indicia will be varied as the parts are relatively rotated. The thicker portions 30 of the member 26 will produce a greater magnification than will the thinner portions 32, due to the outer wall curvature and the relative relation of the adjacent inner and outer walls of the transparent tube.

By means of this structure, the indicia, which, due to the small diameter of the barrel, must necessarily be small, will be very legible when viewed through the transparent tubular member. It will be noted that there is a space 34 between the inner wall of member 26 and barrel 10, thus preventing possible wearing away of the indicia as the parts are relatively operated. Indicia (not shown) might also be produced on the outside surface of member 26 to obtain different effects in combination with the indicia on barrel 26 as they are relatively moved.

The modified form shown in Figs. 4 and 5, is of a screw pencil wherein tip 40 is rotatable relative to barrel 42 to move lead 44, which is mounted in the propelling mechanism 45. The cap 46 may be removably mounted on barrel 42 to cover an eraser 48. The transparent body member 50 extends over the major portion of the central portion of barrel 44, on which are produced indicia 52.

In the manufacture of this type pencil, the indicia are produced on the barrel, then the transparent body member is forced longitudinally thereover so that it will not accidentally separate when cap 46 is removed.

Referring to Fig. 5, it will be noted that member 50 is hexagonal in cross sectional area, thus presenting varying wall thicknesses to produce different degrees of magnification of the indicia when viewed therethrough. Furthermore, the hexagonal form of pencil has been found to be a very convenient and popular shape.

In Fig. 6, the modified form of the transparent body member, as shown in cross section, has concentric, cylindrical inner and outer walls, thus producing the ordinary round type pencil.

The barrel members may be colored if desired to obtain pleasing color combinations, also the body member may be made of any diaphanous material which would permit the indicia to be discerned therethrough.

Many minor changes and variations might be made in the structure of this invention without departing from the scope of the invention, and it is therefore desired to be limited only by the scope of the claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a device of the character described a rotatably mounted barrel, a tubular diaphanous housing having an inner cylindrical wall of relatively greater diameter than the outer wall of said barrel over which it is positioned and having an outer wall of substantially elliptical cross-sectional form whereby the thickness of the wall of said housing is non-uniform, a series of indicia carried on the outer surface of said barrel in spaced relation to the inner wall of said housing whereby as said barrel is rotated beneath said housing the indicia on said barrel will be magnified to various degrees by said elliptical housing.

2. In a device of the character described, an elongated housing including a transparent central section having an inner cylindrical wall and an outer wall of substantially elliptical cross sectional form, whereby the thickness of the wall of said central section is non-uniform, a tubular barrel axially mounted in said housing for rotation beneath said elliptical central section and in spaced relation thereto, a series of indicia carried on the outer surface of said barrel in spaced relation to the inner cylindrical wall of said transparent section, and means carried by said barrel and extending beyond said transparent section whereby said barrel is rotated to position said indicia at various positions beneath said transparent section whereby they are magnified to various degrees.

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