

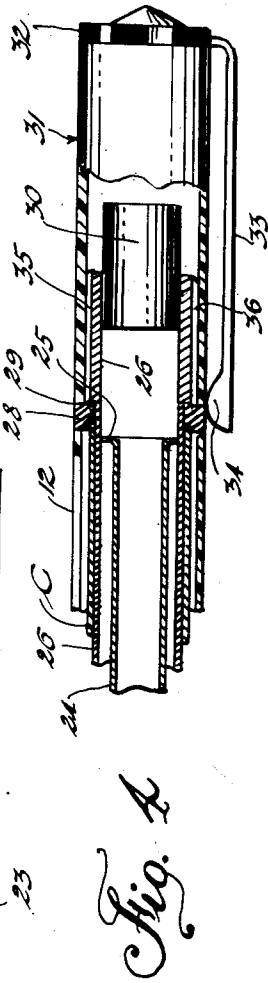
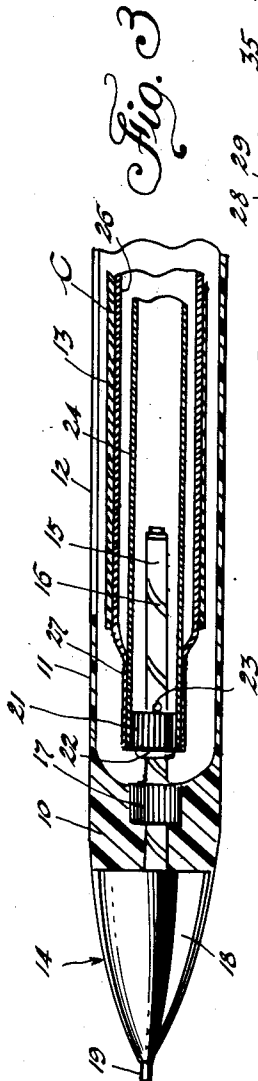
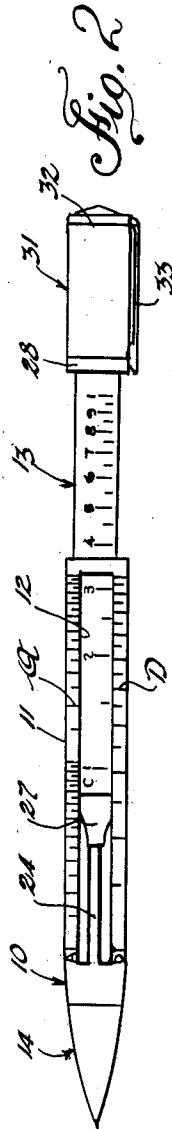
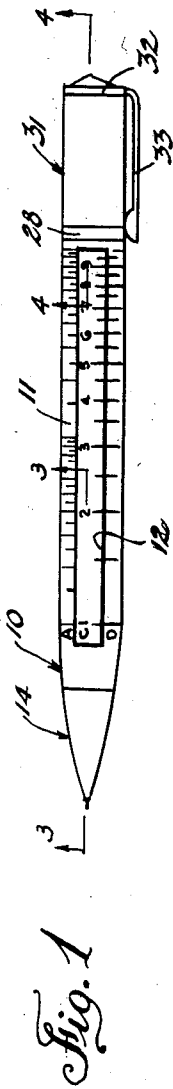
Sept 17, 1957

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2,806,649

SLIDE RULE PENCIL

Filed Nov. 6, 1953



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2,806,649

**SLIDE RULE PENCIL**

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Application November 6, 1953, Serial No. 390,494

1 Claim. (Cl. 235—79.5)

This invention relates to a slide rule pencil.

It is an object of the present invention to provide a combined slide rule and pencil construction which will render available to the user of the slide rule a pencil for immediately putting down the data obtained therefrom.

It is another object of the invention to provide a slide rule pencil which can be carried in the pocket and to thereby eliminate the need for carrying two separate items such as a separate bulky slide rule by the person making frequent calculations with the slide rules and to render the slide rule readily available from the vest pocket and in the same manner that a pencil is always readily available.

It is another object of the invention to provide a slide rule pencil wherein the parts of the slide rule are fixed to the pencil parts for easily relative sliding movement therebetween and such that the alignment of the parts are effectively maintained regardless of the distance to which the slide part has been extended from the pencil parts.

It is another object of the invention to provide a slide rule pencil wherein the slide rule parts can be easily accommodated on standard pencil parts in a rigid and simple manner.

Other objects of the invention are to provide a slide rule pencil construction which is simple, inexpensive to manufacture, has a minimum number of parts, easy to manipulate, of pleasing appearance, durable and has long life, effective and efficient in use.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a side view with the parts unextended;

Fig. 2 is a side view with the slide part extended from the pencil part as in use;

Fig. 3 is an enlarged fragmentary sectional view taken on line 3—3 of Fig. 1;

Fig. 4 is an enlarged fragmentary sectional view taken on line 4—4 of Fig. 1.

Referring now to the figures, 10 represents a main body part, preferably formed of plastic and having a hollow shell portion 11 extended therefrom. This shell portion has an elongated slot 12 with slide rule graduations "A" and "D" extending respectively along the opposite sides of the slot. The end of the sleeve portion 11 is open and a movable slide rule part 13 having a "C" scale thereon, is slidable.

An automatic pencil head indicated generally at 14 is fixed to the plastic body 10. This pencil head includes a lead container sleeve 15 extending into the sleeve portion 11 and having the usual helical slot 16. This sleeve 15 extends through the body 10 and its operating member 17 is embedded therein. This operating member 17 is serrated to provide a good grip with the plastic material. As tapered head body 18 is turned relative to the body 10 a pencil lead 19 will be extended or retracted from the end thereof.

On the sleeve 15 there is fixed a serrated member 21 that is secured against axial displacement thereon by a shoulder 22 and an outward depression 23. Preferably the member 21 has a tight fit and is held against turning upon the sleeve 15 as well as against axial displacement thereupon. Fixed to the member 21 is an internal sleeve

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24 that extends substantially the full length of the sleeve portion 11 and has at its outer end a radially outwardly turned flange 25.

The slide member 13 in addition to the scale "C" of plastic has a slide sleeve 26 slidable upon the inner sleeve 24 and concentric therewith. This sleeve has a reduced diameter end portion 27 adapted to slidably fit the inner sleeve 24 and to provide a bearing surface. The major portion of the sleeve 26 is radially spaced from the surface of the inner sleeve 24. This reduced diameter end portion 27 provides less frictional engagement with the sleeve 24 and thereby makes the slide part 13 more free for easy sliding movement along the inner sleeve 24.

The scale "C" abuts a ring 28 and is preferably held in place upon the sleeve portion 26 by an adhesive. The ring 28 is shouldered against the outer end of the sleeve 26 as indicated at 29. An eraser 30 is provided in the outer end of the sleeve 26 and access to the eraser can be had by removing a plastic sleeve cap 31 having a metal head 32 on its outer end securing a pocket retaining clip 33 that has an enlargement 34 that bears against the outer surface of the ring 28. The inner surface of the plastic sleeve cap 31 bearing against diametrically opposite elongated projections 35 and 36 in a friction-tight manner to normally hold the cap 31 in place over the eraser 30.

The inner surface of the sleeve 26 rides over the edge of the flange 25 of the inner member to maintain a concentric radially spaced relationship of the sleeve 26 upon the sleeve 24 and helps to maintain a true axial relationship therewith during the sliding movement.

It will now be apparent that there has been provided a combined pencil and slide rule wherein the pencil parts serve as a support for the slide rule parts, the inner sleeve 24 being rigidly fixed to the pencil sleeve 15 by means of the member 21 and this sleeve in turn supporting the slide part 13. Slide rule parts are used in the regular manner with the different scales being prepared with one another to give up the desired answer or data. It will also be apparent that the slide rule parts serve as a support for pencil and eraser parts and that a cap can conveniently be disposed upon one of the slide parts to cover the eraser and provide a clip portion by which the pencil can be secured to the pocket of the owner.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What is claimed is:

A slide rule comprising a hollow outer sleeve having an elongated slot with slide rule graduations on the opposite sides thereof, a concentric inner sleeve secured within said outer sleeve, a third hollow sleeve disposed between and spaced apart from said outer sleeve and said inner sleeve and having slide rule graduations alignable with the graduations on said outer sleeve, a reduced diameter portion at one end of said third sleeve slidable on said inner sleeve, a radial flange extending outwardly from said inner sleeve and adapted to bear against the inner wall of said third sleeve, and a ring member secured to said third sleeve outwardly of the graduated portion thereof and adapted to abut the end of said outer sleeve.

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