June 20, 1939. D. C. FEATHER 2,162,914

PENCIL HOLDER

Filed Dec. 11, 1937 2 Sheets-Sheet 1

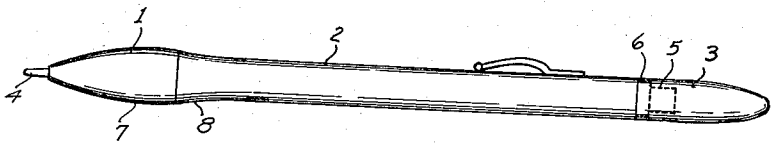


Fig. 1

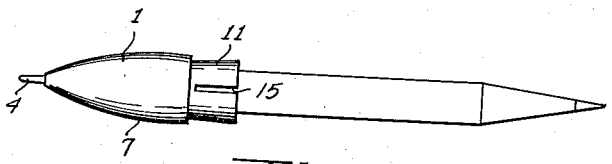


Fig. 2

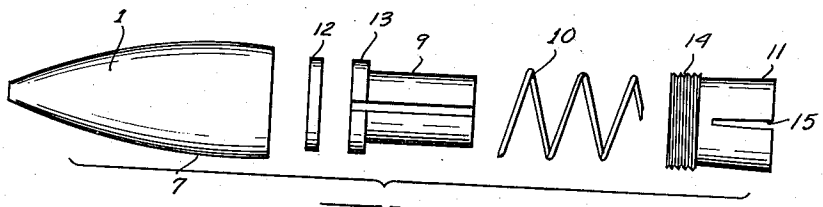


Fig. 3

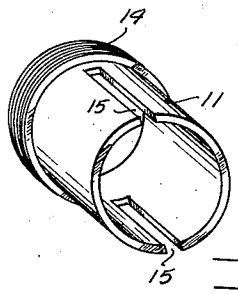


Fig. 4

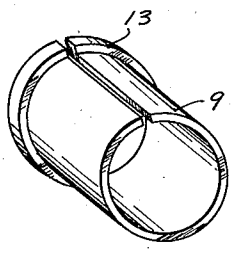


Fig. 5

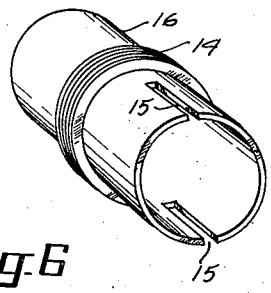


Fig. 6

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PENCIL HOLDER

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2 Sheets-Sheet 2

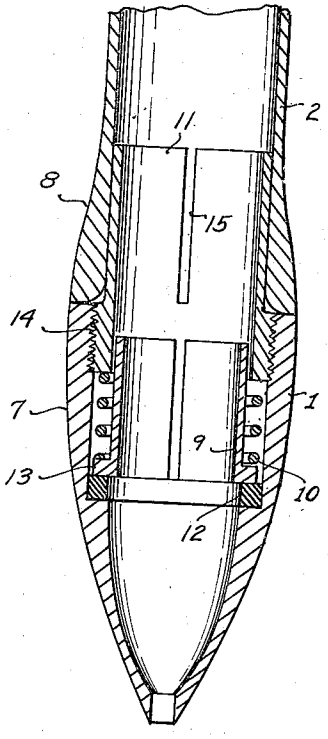


Fig. 7

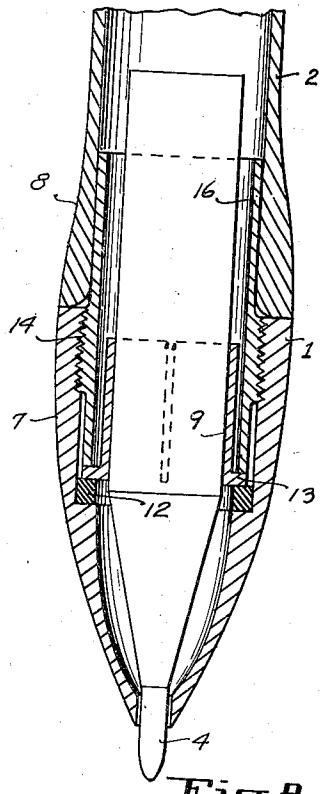
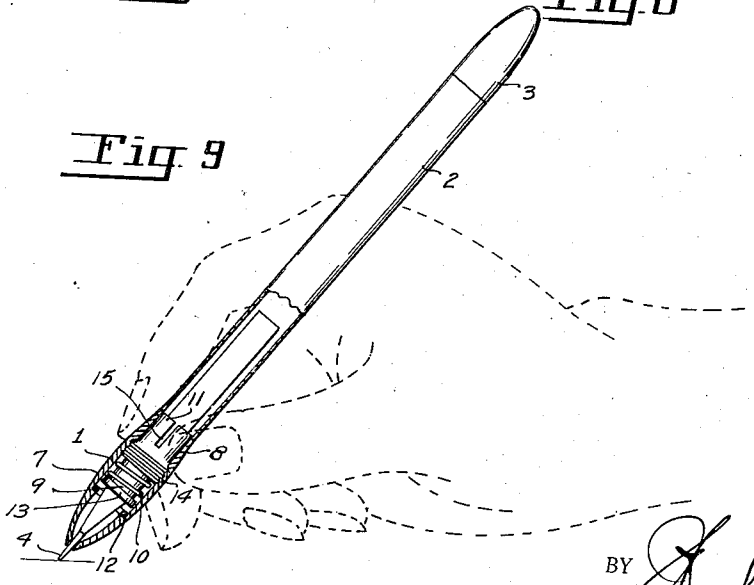


Fig. 8

Fig. 9



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2,162,914

UNITED STATES PATENT OFFICE

2,162,914

PENCIL HOLDER

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Application December 11, 1937, Serial No. 179,308

4 Claims. (Cl. 120—9)

This invention relates to a new and improved holder for pencils, and has particular reference to a holder into which an ordinary pencil may be inserted for use.

Notwithstanding the fact that the market affords a wide variety of "mechanical" pencils, the fact remains that the common pencil—i. e., a slender cylinder or strip of black lead, colored chalk, slate, or similarly used element encased in a handle of wood, paper and the like, to be sharpened and used for writing or drawing—has ever been the most practical and efficient of all writing instruments. An advantage, however, offered by the mechanical pencil is its constant length, notwithstanding the length of the lead insert, whereas repeated sharpening of an ordinary pencil materially reduces its length.

Applicant has provided a holder for pencils which has the appearance of a mechanical pencil, but which in fact constitutes a "handle" for an ordinary pencil, and into which a pencil of an inch or more in length can be inserted for continued use. One embodiment of the invention seats or grasps the pencil in such manner as to render the pencil yielding to pressure upon the point. By reason of this particular feature the point is less apt to be broken when the pencil is applied to the paper, which is an advantage much to be desired by persons who prefer the use of a pencil sharpened to a long thin point.

It is an object of the invention to provide a holder for pencils which is practical and useful and which enables use of the full length of the pencil.

A further object of the invention is to provide a holder for pencils which is easy to grasp, which does not promote fatigue when writing, and which provides a handle of constant length for the pencil.

A further object of the invention is to provide a pencil holder for pencils which provides a handle of constant length for shortened pencils, and into which the pencil may be retracted when not in use.

A further object of the invention is to provide a holder for pencils which seats or grasps the pencil in such manner as to render the pencil yielding to pressure upon the point, the force which causes the point to project from the holder being constant irrespective of the length of the pencil.

With these and other advantages and objects in view, the invention resides in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings and set forth in the appended claims; it being understood that various changes in form, proportion, size and details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:

Figure 1 is a side elevation of a pencil holder embodying the present invention.

Figure 2 is a side elevation of the tip of the pencil holder showing a pencil inserted therein.

Figure 3 is a side elevation of the tip and parts normally mounted therewithin which constitute the mechanism for grasping or seating the pencil.

Figure 4 is a perspective view of the piece which, by threadedly engaging the tip and frictionally engaging the tubular casing, forms the connecting means for securing the tip to the body of the holder.

Figure 5 is a perspective view of the sleeve for receiving and holding the pencil.

Figure 6 is a perspective view of a connecting member for use in a pencil holder in which the pencil is not yieldable to pressure applied to the point.

Figure 7 is a sectional view of the tip end of a pencil holder embodying a construction in which the pencil is yielding to pressure upon the point, showing the parts in assembled relation.

Figure 8 is a sectional view of the tip end of a pencil holder and assembled mechanism, illustrating a construction in which the pencil is not yielding to pressure applied to the point.

Figure 9 is a side elevation of a pencil holder, partly in section, showing its use.

Primarily the pencil holder is made up of three sections or parts, namely, a tip 1, a tubular casing 2, and a cap 3. The tip forms the conventional tapered portion of the holder, and is provided with a central opening in its outer end from which protrudes the point 4 of the pencil. As illustrated, the casing 2 is in the form of a tube, its inside diameter being large enough to receive a lead pencil and permit the same an endwise movement therewithin. The casing 2 is open at one end and, together with the tip 1, forms a hollow receptacle for a pencil. The other end of the casing is closed by an eraser 5 which is anchored in a reduced portion 6 of the casing. The cap 3 frictionally engages the reduced portion of the casing, and serves as a cover for the eraser 5.

At a fixed distance from the end of the tip the outside diameter thereof is increased to form an annular protuberant portion 7 slightly larger in

diameter than the tubular casing 2. Between the casing 2 and the point of largest diameter of the tip is an outward slope 8 upon which the fingers rest when writing. For practical purposes a difference of 40/1000 of an inch in the diameters of the casing and of the tip is sufficient to provide a rest for the fingers and to prevent them from slipping toward the point of the holder.

Within the tip is housed the mechanism for grasping or seating the pencil and, if desired, for rendering it yieldable to pressure applied to the point. In the mechanism shown in Figures 3 and 7, the pencil holding mechanism comprises a sleeve 9, a compression spring 10, and a connecting member 11. Preferably, though not necessarily, a rubber or composition washer 12 is inserted in the tip to provide a cushion or shock absorber between the sleeve 9 and the wall of the tip.

The sleeve 9 is of such diameter that it fits tightly over the wood casing or handle of an ordinary lead pencil, and is that part of the mechanism which grasps the pencil and in which the pencil is firmly seated. Because of the fact that pencils commonly vary as much as 25/1000 of an inch in diameter, the sleeve is split along one side to allow for such expansion as may be necessary to receive and grasp pencils of differing diameters. At its lower end the sleeve 9 is peripherally flanged as at 13, this flange at once serving the two-fold purpose of providing a seat for the spring 10, and providing a stop for engaging the washer 12 to arrest the downward thrust of the pencil. Otherwise the force of the spring, if transmitted directly to the pencil, would tend to cause the tapered end of the pencil to break through the end of the tip. At its upper end the spring 10 bears against the lower or inner end of the connecting member 11 which, being immovable, provides a bearing against which the spring is compressed whenever sufficient pressure is applied to the point of the pencil to move the flange 13 of the sleeve 9 out of engagement with the washer 12.

The connecting member 11 threadedly engages the tip at 14 and projects therefrom to provide a friction joint between the tip and the casing 2. That portion of the connecting member which projects from the tip is split longitudinally thereof, as at 15, and is flared slightly so as to be compressed when engaged by the end of the casing. In place of the friction joint just described, it will be appreciated that the connecting member may be threaded throughout its full length, and be threadedly engaged by both the tip 1 and the casing 2. It will be noted that the inside diameter of the connecting member is larger than the sleeve 9, and that the free end of the sleeve extends into the inner end of the connecting member. By this means, if it should happen that an attempt were made to greatly expand the sleeve by inserting an oversized pencil, the connecting member 11 would serve as a collar to arrest expansion of the sleeve and so prevent it from splitting the tip.

To make use of the pencil holder the pencil to be inserted therein is first sharpened and then inserted in the tip by pushing it into the sleeve 9 until the point 4 protrudes from the end of the tip. Thereupon the handle of the pencil is inserted into the casing 2 of the pencil holder, and by the same act and at the same time the casing is caused to frictionaly engage the connecting member 11. In this manner the casing becomes a handle in place of the wood or paper casing of the pencil. To remove the pencil from the pencil holder the casing 2 is first caused to disengage the tip, thus exposing the pencil, and the pencil is pulled from the open end of the tip. When the pencil is pulled from the tip, the spring 10 is fully compressed against the inner end of the connecting member 11, and at the moment the sleeve 9 releases the pencil the sleeve is returned to normal position with the flange 13 bearing against the washer 12, which absorbs the shock engendered by the action of the spring.

If it be preferred that the pencil be not yielding to pressure applied to the point, the connecting member may be so made as to extend inwardly from the threaded portion 14 and abut against the flange 13 of the sleeve 9 to firmly hold the sleeve in unyielding engagement with the washer 12. A sleeve 16 of this nature is disclosed in Figures 6 and 8, in the latter of which is illustrated an assembly wherein the pencil is not yielding to pressure applied to the point. In such construction the elongated connecting member 16 takes the place of both the shorter connecting member 11 and the spring 10. Practically the entire length of the sleeve 9 is positioned within the connecting member 16, which serves to arrest such expansion of the sleeve as would otherwise damage the tip. It is not necessary that the washer be included in the assembly of parts illustrated in Figure 8, although the presence of a resilient cushion between the sleeve 9 and the wall of the tip lessens the danger of breaking the tip when inserting a pencil therein.

In each of the constructions illustrated, the pencil holder comprises a hollow cylinder for receiving a pencil, the cylinder having a detachable tip in which the pencil is secured for writing purposes. Because the sleeve 9 is of slightly smaller diameter than the diameter of an ordinary pencil, a pencil may be carried loosely in the casing 2 without danger of the point protruding from the tip 1 until such time as the pencil is forcibly inserted therein. Thus, when not in use, the pencil may be retracted from the tip and carried wholly within the casing.

Heretofore, in pen and pencil constructions in which the pencil is spring seated, the pencil has been mounted in a tubular case with a spiral spring behind it to project it into working position. Naturally, in such construction, the spring does not exert the same force upon short and long pencils. In the present construction the force which causes the point to project from the tip is constant, irrespective of the length of the pencil, because the spring does not act directly upon the pencil, but rather upon the pencil holding member, i. e., the sleeve 9.

Among other advantages which result from the present invention is the saving effected by the use of the pencil holder. Not only does the holder provide a handle for use of pencils of extremely short lengths, but it serves to prevent accidental breaking of the point, especially of the exceptionally brittle colored leads. Another advantage is the fact that because the pencil holding mechanism is mounted in the tip, the greatest weight of the holder is concentrated between or below the finger tips.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

1. A pencil holder, comprising a tubular casing adapted to form a handle for a pencil, a detachable tip forming a closure for one end of said casing, an expansion sleeve mounted in said tip

for frictionally engaging a pencil and holding it in writing position with its point protruding from the end of said tip, and a collar mounted within said tip over said sleeve for limiting the expansion of said sleeve.

2. A pencil holder, comprising a tubular casing and a detachable tip forming a closure for one end thereof, a pencil holding member mounted in said tip for receiving a pencil and holding it in writing position with its point protruding from said tip, the pencil holding member being spring-seated to cause the pencil to be yielding to pressure applied to its point.

3. A pencil holder, comprising a tubular casing and a detachable tip forming a closure for one end thereof, a pencil holding member mounted in said tip for holding a pencil in writing position with its point protruding from the end of said tip, a connecting member adapted to be engaged by both the casing and the tip for securing the parts in unitary relation, and a spring disposed intermediate the pencil holding member and the connecting member for causing the pencil to be yielding to pressure applied to its point.

4. A pencil holder, comprising a tubular casing and a detachable tip forming a closure for one end thereof, a pencil holding member mounted in said tip for holding a pencil in writing position with its point protruding from the end of said tip, and a spring seated in said tip and bearing against said pencil holding member for causing the pencil to be yielding to pressure applied to its point.

DAVID C. FEATHER.