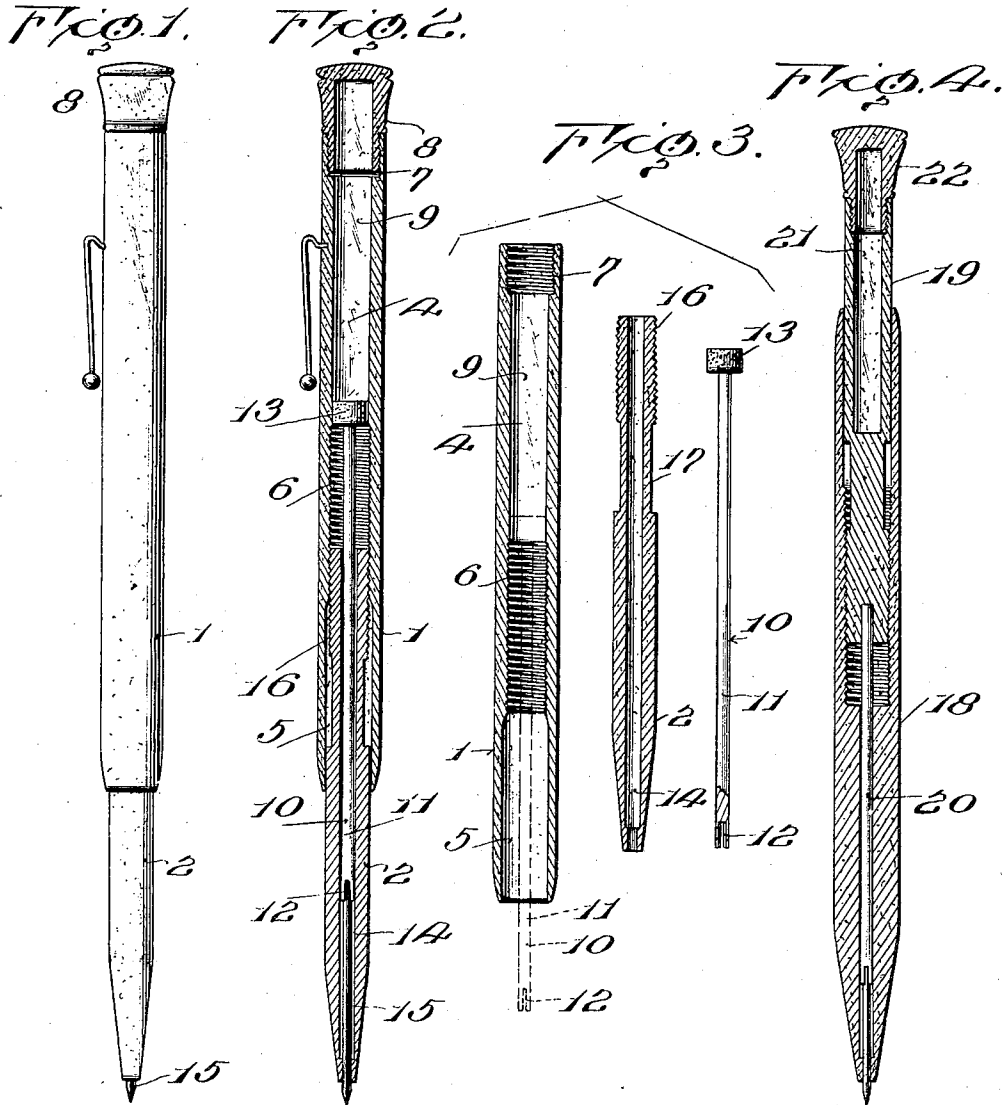


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J. WALLACE.
PENCIL.
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UNITED STATES PATENT OFFICE.

JOSEPH WALLACE, OF NEW YORK, N. Y.

PENCIL.

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To all whom it may concern:

Be it known that I, JOSEPH WALLACE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Pencils; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in pencils, and more particularly stated contemplates the production of a pencil of the magazine type in which the lead is advanced or projected from the pencil to form a writing or marking point.

An object of my present invention is to provide a pencil of comparatively simple construction, and consisting of but few parts which can be inexpensively and easily manufactured.

Another object of the invention is to produce a magazine or propelling pencil having a barrel section of novel construction, said section being movably associated with a tubular end section, and arranged to permanently receive the lead holder, whereby upon the positive movement of the aforesaid barrel and tubular end sections, the writing lead is projected or retracted as may be desired.

A further object of this invention is to provide cooperating barrel and tubular sections of light weight, the interior and exterior portions of which are formed so as to firmly support the lead against escape or looseness in writing.

With these and other objects in view my invention further consists in the construction and arrangement of the several parts hereinafter described and pointed out in the appended claims.

In the accompanying drawings in which I have illustrated two embodiments of my improved pencil,

Figure 1 is a side elevation of the pencil;

Figure 2 is a vertical sectional view through the pencil;

Figure 3 is a group figure of the three parts constituting my pencil shown separated and in vertical section; and

Figure 4 is a vertical sectional view through a modified form of pencil.

The present invention has been primarily

designed with a view to materially simplifying the present construction of propelling pencils, and includes two longitudinally movable complementary sections of light material arranged one within the other, and effectively supported against wobbling or looseness. One section, termed the barrel section for purposes herein, rigidly supports the lead holder, and the other tubular tapered or pointed section serves to guide and support the lead holder and lead. A simple screw thread connection permits of the relative movement of the barrel and tubular sections, one toward the other, thereby providing for the uncovering of the lead writing point when the tubular section is drawn within the barrel. The parts can be easily separated and replaced.

Referring to the drawings in which corresponding reference characters designate similar parts in the several views, my improved pencil includes a barrel section 1, into which is threaded the tubular tapered or pointed section 2. The material of which these said sections may be made, may be wood, aluminum, brass, or other metal, hard rubber, or composition. I prefer, however, a light material, such as hard rubber.

The barrel 1 is of novel construction and comprises a cylindrical body portion arranged and adapted to be drilled and threaded as shown for example in Figure 3. The opening or bore originally formed in the barrel is indicated by the numeral 4, and it is from this diameter that the interior of the barrel is drilled and threaded. In practice, the opening 4 is drilled to a greater diameter a distance into the barrel as shown by the numeral 5. From a point at which this drilling stops to a point substantially midway or intermediate the barrel, the original opening 4 is threaded as shown at 6. These internal threads are located at a point well inside the barrel. Internal threads 7 are provided at one end of the barrel for the cap 8, which forms a closure for the chamber 9 adapted to receive the extra leads as will be understood.

The lead holder 10 consists of a rod preferably of brass or other metal, upon one end of which is formed the usual split clamp section 12 for gripping and retaining the writing lead, and upon the other end of which is secured a head 13. Any means of securely attaching the rod 11 to the head 13 may be employed. The head 13 is cylindrical.

drical in shape, and is of a diameter which can be forced or pressed into the opening 4 of the barrel 1 and there snugly retained against dislodgment. The material of which the head 13 is made may be hard rubber or metal, it being desirable to provide materials which will frictionally adhere and remain in position. After once being forced through the threaded end of the barrel and the head 13 is forced into the opening 4 until it reaches a point about midway or intermediate the barrel and in close proximity to the threaded portion 6.

With the lead holder securely fixed within the barrel 1 during manufacture, it will be seen that the possibility of its being lost or wrongly inserted by a user of the pencil is eliminated. The lead holder is shown in position in dotted lines in the barrel in the group Figure 3.

The tubular section 2 constitutes the taper point of the pencil, and serves to guide and uncover the lead. An opening 14 of relatively small diameter is provided in the section 2, said opening being arranged and adapted to slidably receive the rod 11 of the lead holder, and also the lead point 15 carried thereby. The diameter of the opening 14 is reduced at the tapered end of the section and is designed to slidably engage the writing lead to prevent wobbling of the writing point as will be understood.

The inner end of the tubular section 2 is threaded as at 16, said threaded portion being arranged to cooperate with the internally threaded portion 6 of the barrel 1. The diameter of the tubular section is reduced as at 17 immediately adjacent the threads 16, thereby providing a suitable clearance for the effective and smooth operation of the screw threading.

The reduced portion 17 stops short however, of the end of the barrel, the normal diameter of the tubular section being restored at this point for sliding engagement with the drilled opening of the barrel 1.

The support of the tubular section 2 at this point and as it passes within the barrel 1 when the lead is uncovered, is important, it being obvious that a strong, durable and firm construction results. The barrel 1 is bevelled at this end and the merging or fitting of the two sections at this point is particularly smooth and unobjectionable.

In use, the barrel 1 may be turned while the tubular section 2 is held firmly, or the reverse operation of holding the barrel and turning the tubular section 2 may be resorted to. In either case, it will be seen that the screw thread connection provides for the relative movement of the barrel and tubular sections, thereby uncovering the lead point 15 for use.

The modified form of pencil shown in

Figure 4 includes the barrel section 18, the lower end of which is tapered and serves to uncover the lead point. An inner section 19 is threaded within the barrel 18, the same relative location of screw threaded connection, that is at a point intermediate or midway the barrel, being maintained, as in the preferred embodiment disclosed herein.

The lead holder 20 is fixed to and carried by the section 19. The extra lead receiving compartment 21 is formed in the said section 19, and the cap 22 serves as a closure therefor.

From the foregoing it will be seen that I have produced a compact and simple pencil in which the screw threaded connections of the complementary sections are entirely concealed and protected. In practice I have found this to be of prime importance.

Various changes in the shape, size, proportion and arrangement of the several parts may be made, and I do not wish to be understood as limiting myself to the exact disclosures herein, but define my invention as follows.

I claim:

1. A pencil of the class described comprising a barrel section formed with an opening or bore a portion of which is internally threaded at a point intermediate the ends thereof, a lead holder secured within the aforesaid opening and having a writing lead adapted to project beyond the barrel, and a tubular section surrounding said lead holder and having an external threaded portion arranged and adapted to engage the aforesaid internal threads of the barrel section, said tubular section being movable within the barrel for uncovering the writing lead, and provided with an outer surface slidably contacting with the interior face of the opening in the aforesaid barrel section.

2. A pencil of the class described comprising a barrel section formed with an opening or bore a portion of which is internally threaded at a point intermediate the ends thereof, another section having an externally threaded portion for engaging said internal threads, said section having a surface arranged for sliding contact with the interior face of the opening or bore in the aforesaid barrel section, a lead holder, and writing lead.

3. A pencil of the class described comprising a barrel section formed with an opening or bore, a relatively long stretch of internal screw threads provided intermediate the ends of said opening, a holder secured within the aforesaid barrel and having a lead supporting rod projecting beyond the barrel, a tubular section having one end tapered for supporting and guiding the lead and the other end externally threaded for engagement with the aforesaid internal threads, means including one end of the barrel sec-

tion for slidingly engaging the tubular section for closing one end of the said barrel opening, and a closure cap for the other end of the opening in said barrel section.

5 4. A pencil of the class described comprising a barrel section formed with an opening or bore, screw threads arranged intermediate the ends of said opening, a lead holding device secured to said barrel and projecting
10 beyond one end thereof, a tubular section surrounding said lead holding device and

having a threaded end portion for engaging the screw threads in the barrel section, said screw thread connections coacting within the barrel and concealed from sight, means in- 15
cluding the sliding fit between one end of the barrel and the tubular section for effectively closing one end of the barrel opening, and a cap for closing the other end of said
20 barrel opening.

In testimony whereof I affix my signature.
JOSEPH WALLACE. 20