

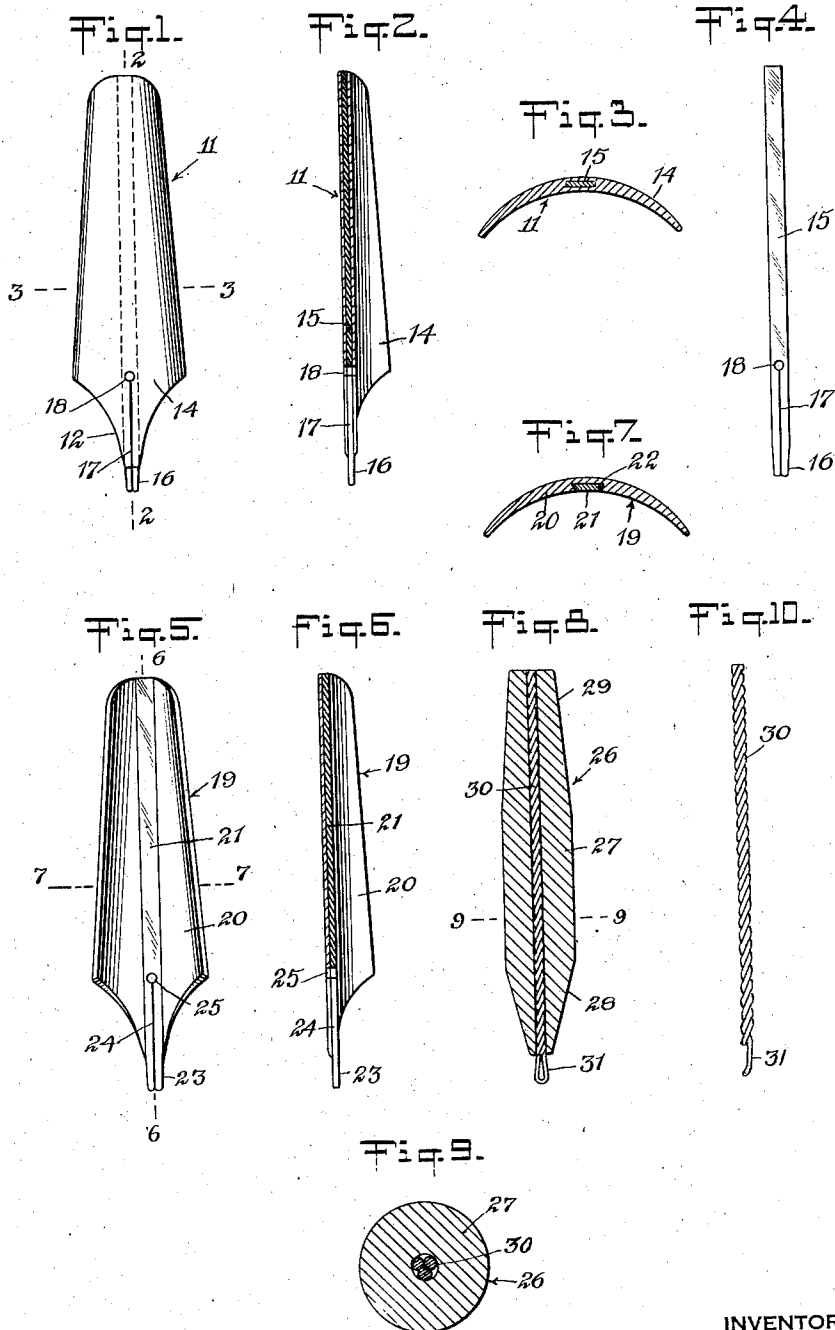
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This invention relates to an improved pen, particularly an improved pen point or nib.

It is an object of the invention to provide an improved pen point made primarily from plastic or other readily available material and which requires a minimum amount of metal for its manufacture.

A further object of the invention is the provision of an improved pen point or nib, of the above character, which is of relatively inexpensive construction, but which is, nevertheless, of attractive appearance and serves in a very satisfactory manner as a writing implement.

In the accompanying drawing:

Fig. 1 is an elevational view of a pen point or nib embodying my invention, showing it from the convex side thereof;

Fig. 2 is a longitudinal sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a cross sectional view on the line 3—3 of Fig. 1;

Fig. 4 is an elevational view of the metallic strip employed in the pen point shown in Figs. 1 to 3;

Fig. 5 is an elevational view of a modified form of pen point or nib embodying my invention, showing it from the concave side thereof;

Fig. 6 is a longitudinal sectional view on the line 6—6 of Fig. 5;

Fig. 7 is a cross sectional view on the line 7—7 of Fig. 5;

Fig. 8 is a longitudinal sectional view of a further modified form of pen point or nib embodying my invention;

Fig. 9 is a cross sectional view on the line 9—9 of Fig. 8; and

Fig. 10 is an elevational view of the metallic insert used in the form of pen point shown in Figs. 8 and 9.

Referring to the first four figures of the drawing, I have shown my invention as embodied in a pen point or nib 11 of conventional shape and size. Thus, the pen point is made from relatively thin material and is of longitudinally bowed formation so as to have a convex and a concave side. At its lower portion, indicated at 12, the nib tapers towards a point, in the usual manner, while at its upper end it is formed into a shank adapted to be inserted in a pen holder or fountain pen barrel. My invention does not reside in the specific shape, size or appearance of the pen point, and this may be varied considerably.

In carrying out my invention, the principal portion or body of this pen point or nib, indicated

at 14, is made from plastic material which is of such character that it will resist the chemicals normally present in ink. For this purpose I prefer to employ a plastic material which will not absorb moisture, such as a polystyrene resin or Lucite (methyl methacrylate resin), although I may also employ other plastics, such as cellulose acetate or butyl resin.

Extending longitudinally of the pen point or nib, at the central portion thereof and embedded in the plastic material, is a metal strip 15 which projects beyond the lower end of the nib at the central pointed portion thereof, as indicated at 16. In the form of my invention shown in the first four figures of the drawing, the metal strip 15 is completely encased in plastic material, with the exception of the point 16 projecting beyond the lower end of the nib.

Adjacent its lower edge the pen point is formed in the usual manner, with a longitudinal slit 17 terminating in an aperture 18, the slit and aperture serving to feed the ink towards the writing point and serving also as a reservoir for the ink. The slit and aperture 17 and 18, respectively, extend not only through the plastic portion of the pen, but also through the metal strip, as shown most clearly in Fig. 4.

The pen point may be formed by molding the plastic portion thereof in a suitable mold. In this connection, the metallic strip 15 may be embedded in the nib by molding the plastic material around it or, if preferred, the plastic portion of the nib may first be molded and thereafter the metallic strip may be inserted into a longitudinally extending aperture provided in the central portion of the nib. Under any circumstances, the metal strip 15 should be firmly held in the plastic portion of the nib so as to prevent relative movement between the parts. When the plastic portion is molded around the metal strip, the parts are retained against relative movement by the adhesion and frictional engagement between the strip and plastic material. When the strip is inserted through an aperture provided in the plastic material, the strip may be held in position either by means of a tight frictional engagement between the strip and the material, or by means of cement or the like.

The completed pen may be employed in the usual manner. Thus, where it is used in connection with a fountain pen, it is inserted in a fountain pen barrel and the ink will feed downwardly from the ink feeder, through the aperture 18 and slit 17, to the projecting point 16. Although the pen point or nib is particularly suitable for

use in connection with fountain pens, it will be appreciated that it may also be inserted in the conventional type of pen holder and used in the conventional manner by dipping the point into ink.

The projecting portion 16 is tapered and shaped into a satisfactory writing point, as shown. The strip 15 may be made from any desired type of metal, although it is preferably made of metal which will resist the corrosive action of ink, such as the noble metals (i. e. gold, platinum, or silver) or stainless steel. Where a soft metal is employed, the projecting point 16 is preferably tipped with a hard metal, such as iridium.

Referring now to the form of my invention shown in Figures 5, 6 and 7, it will be seen that I have provided a pen point or nib 19, similar in shape and appearance to the nib 11 and in which the principal portion or body of the nib, indicated at 20, is likewise made of a similar type of plastic material.

Extending longitudinally of the central portion of the nib, I also provide a metallic strip 21 resembling in many respects the strip 15 and constructed of similar material. It will be seen that the strip 21, instead of being completely embedded in the plastic material in the manner of the strip 15, is exposed on one of the surfaces thereof, in the instant embodiment, on the inner or concave surface. To firmly retain the strip 21 in the plastic material, it is preferably flared outwardly on its inner surface, as shown at 22, with the plastic material embracing and engaging the flared portions.

As in the first form of my invention, strip 21 projects beyond the lower portion of the nib, as shown at 23, and the nib is provided with an upwardly extending slit 24, terminating at an aperture 25. The nib shown in Figs. 5 to 7 may be formed by molding the plastic portion in a suitable mold, and the strip 21 may be secured in position either by molding the plastic material around it, in the manner shown, or by inserting the strip into a slot of mating configuration formed in the plastic material. Regardless of the manner in which the nib is formed, the metallic strip 21 should be firmly held in position against accidental displacement.

The plastic and metallic materials employed in manufacturing the second form of my invention may be similar to those employed in the first form of my invention, and the nib is used in a similar manner.

Referring to the form of my invention shown in Figs. 8, 9 and 10, it will be seen that I have provided a pen point or nib 26 having a central cylindrical portion 27 terminating in a truncated conical portion 28 at its lower end, and in a truncated conical portion 29 at its upper end. The portion 29 serves as a shank which may be fitted into the barrel of a fountain pen or into a pen holder. The portion 28 tapers towards a suitable writing point.

The principal portion or body of the nib 26 is formed of plastic material similar in character to the plastic material employed in the first two forms of my invention, and extending longitudinally of the body portion through the center thereof, is a duct in which I provide a metallic member 30 which serves as an ink feed. The metallic member or feed 30 consists of a plurality of strands of wire, twisted together, in the manner shown in the drawing, in which three strands are illustrated. The metallic member or feed 75

terminates in a suitable writing point 31 projecting beyond the lower end of the nib, and in this connection I have found that satisfactory results are obtained by forming two of the strands integrally, and forming the connected portion into a loop projecting beyond the end of the nib. Any type of metal may be used in the wires forming the metal member or feed. However, I prefer to use the metals listed above in connection with the strip 15.

Due to the fact that small interstices are provided between the strands of metal which are twisted together, in the manner shown, and between the strands and the adjacent sides of the duct extending through the plastic material, the metallic member serves as an ink feed, and ink can be fed downwardly along the member 30 from the upper end of the nib to the projecting loop 31. Due to this fact, the nib 26 may be inserted directly in a fountain pen barrel and ink from the fountain pen reservoir will feed downwardly through the metallic feed to the writing point.

The plastic portion of the nib, shown in Figs. 8 to 10, may be molded in a suitable mold and the metallic member or feed 30 may then be inserted through a central bore provided through the plastic portion. In this connection there should be a tight frictional engagement between the metallic feed and the plastic portion of the nib in order to prevent relative movement of the parts.

From the foregoing description of several embodiments of my invention, it will be seen that my improved pen point or nib is made primarily from plastic material or some other material which is readily available and that the pen point or nib requires only a minimum amount of metal. It will also be seen that my improved pen point or nib is of relatively inexpensive construction, but yet is of attractive appearance and serves very satisfactorily as a writing implement.

It should be understood, of course, that modifications may be made in the illustrated and described embodiments of my invention without departing from the invention as set forth in the accompanying claims.

I claim:

1. A pen nib comprising a body portion formed of plastic material having attached thereto a metal member which is held against movement with respect to the body portion and projects beyond one end thereof, the projecting portion serving as a writing point.

2. A pen nib comprising a body portion formed of plastic material having embedded therein a metallic member which is retained against movement with respect to the body portion and projects beyond one end thereof, the said projecting portion serving as a writing point.

3. A pen nib comprising a body portion formed of plastic material, and an elongated relatively narrow metallic member attached to the body portion and held against movement with respect thereto, the said metallic member having a portion projecting beyond one end of the body portion of the nib and serving as a writing point.

4. A pen nib comprising a body portion formed of plastic material, and an elongated relatively narrow metallic member attached to the central portion of the body member and extending longitudinally thereof for substantially its entire length, the said metallic member having a portion projecting beyond one end of the body portion and serving as a writing point.

5. A pen nib comprising a body portion formed of plastic material, and an elongated relatively narrow metallic strip embedded in the body portion and extending longitudinally thereof through its central portion, the said metallic strip having a portion projecting beyond one end of the body portion and serving as a writing point.

6. A pen nib comprising a transversely arcuate, relatively thin, broad body portion formed of plastic material having attached thereto a metallic member which is retained against movement with respect to the body portion, said metallic member having a portion projecting beyond one end of the body portion and serving as a writing point.

7. A pen nib comprising a transversely arcuate, relatively thin, broad body portion formed of plastic material, and a metallic member embedded therein and retained against movement with respect thereto, said metallic member having a portion projecting beyond one end of the body portion and serving as a writing point.

8. A pen nib comprising a transversely arcuate, relatively thin, broad body portion formed of plastic material, and a relatively elongated narrow metallic strip embedded in the body portion and extending longitudinally thereof through the central portion, said metallic strip having a por-

tion projecting beyond one end of the body portion and serving as a writing point.

9. A pen nib comprising a body portion having a duct extending longitudinally thereof, and an ink feeder positioned in the duct, said ink feeder comprising a plurality of strands of wire twisted together.

10. A pen nib comprising a body portion formed with a longitudinally extending duct, and an ink feeder positioned in the duct, the said ink feeder comprising a plurality of strands of wire twisted together, the wire being formed with a portion projecting beyond one end of the body portion and serving as a writing point.

11. A pen nib comprising a body portion formed of plastic material and having a duct extending longitudinally thereof, and an ink feeder positioned in the duct, said ink feeder comprising a plurality of strands of wire twisted together, said strands of wire having a portion projecting beyond one end of the body portion and serving as a writing point.

12. A pen nib as set forth in claim 11 in which the projecting portion of the strands of wire comprises a loop interconnecting two of the strands.

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