

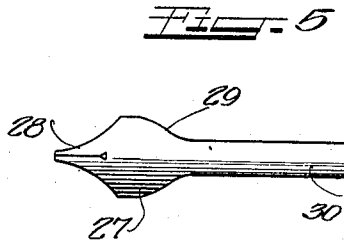
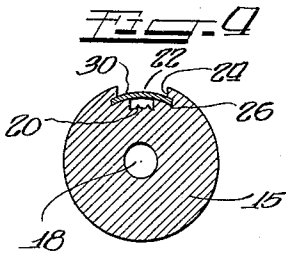
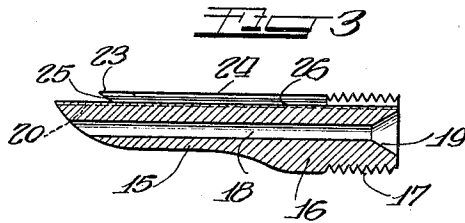
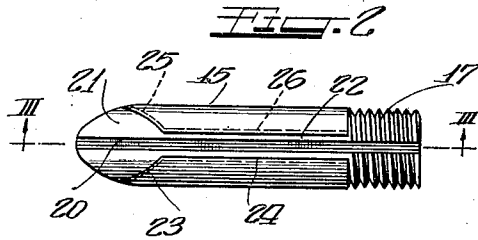
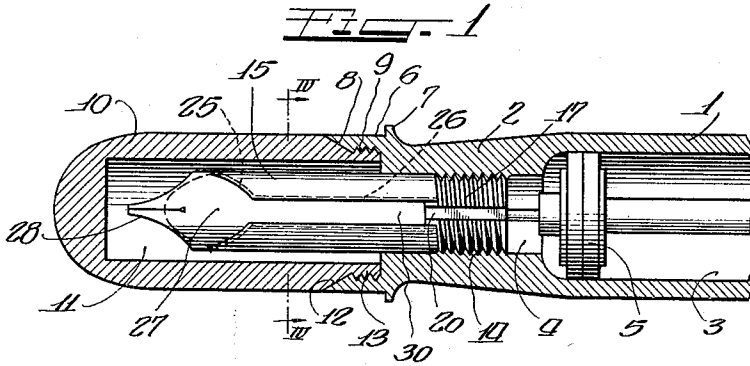
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FEED BAR AND PEN POINT

Filed June 29, 1931



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FEED BAR AND PEN POINT

Application filed June 29, 1931. Serial No. 547,549.

In the construction of various makes of fountain pens it has heretofore been the practice of providing feeders or feed bars having ink feed passages or grooves extending longitudinally in the top surface thereof. In the majority of the earlier types of fountain pens the feed bars are mounted in the sections with pen points, the shanks of which are engaged over or seated upon the longitudinally grooved upper portions of the feed bars and are inserted into the ends of the fountain pen sections to be held in position by friction. It has been found in the early types of fountain pens that by merely seating the pen point upon a section that the pen point must be engaged in position by an expert and after being mounted very often is moved with respect to the feed bar so that the pen point will not write properly. In the earlier types of fountain pens the pen point and feed bar are entirely separate pieces so that when the same are removed from the fountain pen section the pen point no longer remains associated with the feed bar. In order that the early types of pen points may have the shank portions thereof engaged over the feed bars, it has been necessary to provide enlarged pen point shanks thereby making it necessary to use considerable amount of gold in the construction of pen points.

The present invention relates to an improved fountain pen feed bar and pen point unit adapted to be removably threaded into position within a fountain pen section with said feed bar being provided with a grooved recess for the definite reception of the reduced shank end of a pen point to positively hold the pen point in a predetermined position with respect to the feed bar and in interfitting relation thereto to hold the feed bar and pen point interfitting one another and adapted to remain associated with one another as a unit when removed from the fountain pen section.

It is an object of this invention to provide a combination feed bar and pen point unit wherein the feed bar is recessed and grooved to removably receive a pen point, the shank portion of which is reduced in size to pro-

vide a pen point of reduced weight and requiring less material affording a considerable saving in the amount of gold required without impairing the quality or serviceability of the pen point.

It is also an object of this invention to provide an improved fountain pen feed bar with a grooved recess shaped complementally to the shape of a fountain pen point shank to receive the pen point shank in a predetermined seated position engaged in the grooves of the recess to hold the feed bar and pen point associated with one another as a unit even when said parts are removed from the fountain pen section.

A further object of the invention is to provide a fountain pen feed bar with a grooved recess shaped to receive a pen point shaped to afford a considerable saving in the amount of gold required without interfering with the tip end of the pen point.

It is furthermore an object of this invention to provide a fountain pen having the feed bar so constructed that the shank end of the pen point may be of substantially minimum size to reduce the amount of gold or precious metal used in the construction of the pen point, making it possible to produce fountain pens at a considerable saving in cost and a positive association of the pen point with the feed bar to hold the pen point and feed bar definitely positioned with respect to one another.

Another object of the invention is to provide a fountain pen feed bar provided with a grooved recess to removably receive the reduced shank end of a pen point in interfitting engagement therewith permitting the shank and pen point to be mounted as a unit by threading the exteriorly threaded shank end of the feed bar into an internally threaded recess provided in the fountain pen section.

It is an important object of this invention to provide an exteriorly threaded fountain pen feed bar having a grooved recess provided therein which is so shaped that the pen point may be so shaped that a considerable saving in the amount of gold or precious metal required for the pen point is mate-

rially reduced, permitting fountain pens to be manufactured at a considerable saving in cost and with increased advantages in the positive assemblage of the pen point with respect to the feed bar positively holding the tip of the pen point properly aligned with the ink feed grooves of the feed bar.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawing.

The invention (in a preferred form) is illustrated in the drawing and hereinafter more fully described.

On the drawing:

Figure 1 is an enlarged longitudinal section of the writing end of a fountain pen having an improved feed bar and pen point embodying the principles of this invention engaged in the section end of the fountain pen barrel.

Figure 2 is a top plan view of the feed bar removed from the fountain pen.

Figure 3 is a longitudinal section of the feed bar taken on line III—III of Figure 2.

Figure 4 is an enlarged transverse detail section of the feed bar and pen point taken on line IV—IV of Figure 1 with the cap omitted.

Figure 5 is a plan view of the improved pen point removed from the feed bar.

As shown on the drawing:

The reference numeral 1 indicates a fountain pen barrel, one end of which is tapered to form an integral section 2. The barrel 1 is provided with an ink chamber 3 which communicates with an axial passage 4 provided in the section end 2 of the barrel. In the present showing of the fountain pen, the same is provided with a plunger filling mechanism designated as a whole by the reference numeral 5. The outer end of the section 2 is provided with an extension sleeve or collar 6 which serves as an ink guard member and is integrally formed on the outer end of the body section to the outside of a bead or flange 7. The bead or flange 7 is integrally formed externally on the outer end portion of the section 2 and serves to separate the section and the ink guard 6. The ink guard sleeve or collar 6 has the end thereof shaped or formed to provide an inner beveled end surface 8, the inner end of which terminates at the outer end of an internally threaded portion 9 provided in the ink guard. For enclosing the writing end of the fountain pen a one piece or unitary cap 10 is provided. The cap 10 has an inner chamber 11 for receiving the outer end of the fountain pen feed bar and pen point. The outer end of the cap 10 is closed while the opposite or inner end is provided with an exterior tapered or beveled surface 12, the outer end of which terminates at the inner end of a reduced externally threaded shank portion or collar 13.

When the fountain pen is not in use the cap 10 is adapted to be threaded into the ink guard 6 as clearly illustrated in Figure 1 with the exteriorly threaded portion 13 of the cap having threaded engagement with the interiorly threaded portion 9 of the ink guard. The cap is threaded into the ink guard until the beveled surface 8 of the ink guard is contacted by the beveled surface 12 of the cap to provide a non-leakable joint between the ink guard and the cap.

The present invention relates more particularly to an improved feed bar and pen point unit which is adapted to be removably engaged in an internally threaded portion 14 provided within the fountain pen section 2 as clearly illustrated in Figure 1. The writing unit comprises a feed bar 15 having an integral shank 16 the end portion of which is externally threaded at 17 to permit the feed bar when projected through the ink guard 6 and into the section 2 to be removably engaged by threading the portion 17 into the threaded portion 14 of the section. The feed bar is provided with an ink intake and discharge passage 18 which extends longitudinally through the feed bar from the outer end to the inner end where the passage flares out to provide a conical recess 19. The feed bar is provided in the top surface thereof with a longitudinally directed ink feed or supply passage or grooves 20 which extend from the tip of the feed bar to the end of the threaded shank section 17. The feed passage 20 may be of the customary compound groove type formed by one or more longitudinally disposed ribs or ridges to afford an arrangement whereby the supply of ink may be smoothly and evenly fed to the outer end of the feed bar and to the fountain pen point. As clearly illustrated in Figure 2, the improved feed bar has the top surface thereof provided with a pen point receiving recess, socket or pocket comprising an outer enlarged tip recess 21 and a shank recess 22 which extends from the recess 21 along the top of the feed bar up to the threaded portion 17 of the feed bar. The edges 23 and 24 are undercut to provide receiving grooves 25 and 26 for receiving the edges of a pen point shank as hereinafter more fully described.

The feed bar is provided with the pen point receiving recess or socket and has the edges forming said recess or pocket grooved or undercut to provide suitable guide grooves for receiving edges of the body and shank portions of an improved type of pen point seated therein for the purpose of holding the pen point removably seated or locked in engagement with the feed bar so that the two members are adapted to be maintained in associated relation to form a unit which when removed from the fountain pen are adapted to remain associated with one another.

Figure 5 illustrates an improved type of

pen point adapted to be constructed of gold or other precious metal which will withstand the action of writing ink. With the improved feed bar provided with the pen point receiving recess or pocket it is possible to provide a pen point which will require materially less gold or metal, thereby providing a pen point of lighter weight and less expense due to the saving in the amount of gold required in the construction of the shank portion of the improved pen point. As clearly illustrated in Figure 5, the pen point comprises a head or body portion 27, the front end of which is tapered and longitudinally split to provide the customary writing tip or nib 28. The rear portion of the body or head 27 of the pen point is tapered or reduced in size to provide shoulders or edges 29 which are shaped complementally to the shape of the feed bar end recesses or grooves 25 to permit the shoulders of the head portion of the pen point to seat in the grooves 25 when the pen point is in position. Integrally formed on the rear end of the pen point head 27 is a stem or shank 30 which is narrow or of reduced width to fit in the shank recess 22 of the feed bar with the longitudinal or side edges of the pen point shank 30 slidably engaged in the side grooves 26 forming part of the pen point receiving recess of the feed bar.

By providing the feed bar with the grooved pen point receiving recess 21—22 a pen point may be provided having a shank or stem which is of small size, thereby greatly reducing the amount of gold or precious metal required in the construction of the pen point. This novel arrangement permits gold pen points to be provided at a considerable saving in cost without interfering with the writing qualities of the tip or nib 28 of the pen point.

The pen point receiving recess provided in the top surface of the feed bar is shaped complementally to the shape of the shank and rear portion of the head of the pen point so that the pen point may be removably engaged in the feed bar recess or pocket 21—22 with the longitudinal edges of the shank portion 30 of the pen point and the rear edges or shoulders 29 of the pen point head 27 seated in the grooves 26 and 25 respectively provided in the feed bar. This arrangement of the interfitting relationship between the feed bar and the pen point permits the pen point to be positively positioned in a predetermined set position of adjustment with respect to the feed bar to insure perfect writing with the tip or nib 28 of the pen point. The interfitting or interlocking engagement between the feed bar and the pen point furthermore affords an arrangement whereby a pen point may be correctly mounted in position by any inexperienced person without requiring the services of an expert. The

grooved recess provided in the feed bar furthermore holds the pen point when in position from sliding or moving peripherally around the feed bar to misplace the nib or tip of the pen point with respect to the ink feed grooves 20 of the feed bar.

The slotted pen receiving recess provided in the feed bar provides an arrangement whereby the pen point may be positively positioned with respect to the feed bar. The exteriorly threaded shank 17 of the feed bar permits the feed bar unit including the feed bar and the pen point to be removably engaged in the interiorly threaded section 2 of the fountain pen barrel. With the pen point seated in interfitting engagement with the recessed feed bar the shank end of the feed bar is projected through the ink guard 6 and into the section passage 4 after which the feed bar is rotated to cause the threaded shank 17 to thread into the interiorly threaded portion 14 of the section 2 to hold the feed bar and the pen point properly positioned with the pen point locked in place against accidental misplacement or shifting with respect to the feed bar.

It will of course be understood that various details of construction may be varied through a wide range without departing from the principles of this invention, and it is therefore not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A fountain pen feed unit comprising a feed bar having an externally threaded shank integrally formed on one end thereof, said feed bar having a pen point receiving recess formed therein with the margins bounding the recess grooved to provide overhanging flanges, and a pen point slidably engaged in the feed bar recess with the body portion of the pen point shaped complementally to the shape of the feed bar recess with margins of the pen point engaged beneath the flanges to hold the pen point frictionally interfitting the feed bar.
2. A fountain pen feed unit comprising a feed bar having a passage and ink feed grooves therein, said feed bar also having a pen point receiving recess therein and a plurality of guide grooves forming flanges overhanging said recess, and a pen point having the shank portion thereof shaped complementally to the shape of a portion of said recess to permit the shank portion of the fountain pen to seat in said recess and project into said grooves beneath the flanges to hold the pen point in interfitting engagement with the feed bar.
3. The combination with a pen feed bar having a pen receiving recess formed therein with said recess provided with a grooved narrow extension, of a pen point comprising a body portion, a nib integrally formed on

one end thereof and a narrow shank integrally
 formed on the opposite end thereof, said pen
 point seated in said recess with the narrow
 shank of the pen point projecting into the
 5 grooved extension of the recess.

4. The combination with an exteriorly
 threaded pen feed bar having passages and
 grooves therein, said feed bar also having a
 grooved recess therein a portion of which is
 10 restricted in width, and a pen point seated
 in the feed bar recess, said pen point having
 an elongated narrow shank adapted to pro-
 ject into the restricted portion of the feed
 bar recess to hold the pen point secured in
 15 interfitting engagement with the feed bar.

In testimony whereof I have hereunto sub-
 scribed my name at Chicago, Cook County,
 Illinois.

SOLOMON M. SAGER.

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