



(22) Date de dépôt/Filing Date: 2012/01/10

(41) Mise à la disp. pub./Open to Public Insp.: 2013/07/10

(51) Cl.Int./Int.Cl. *B43K 29/08* (2006.01)

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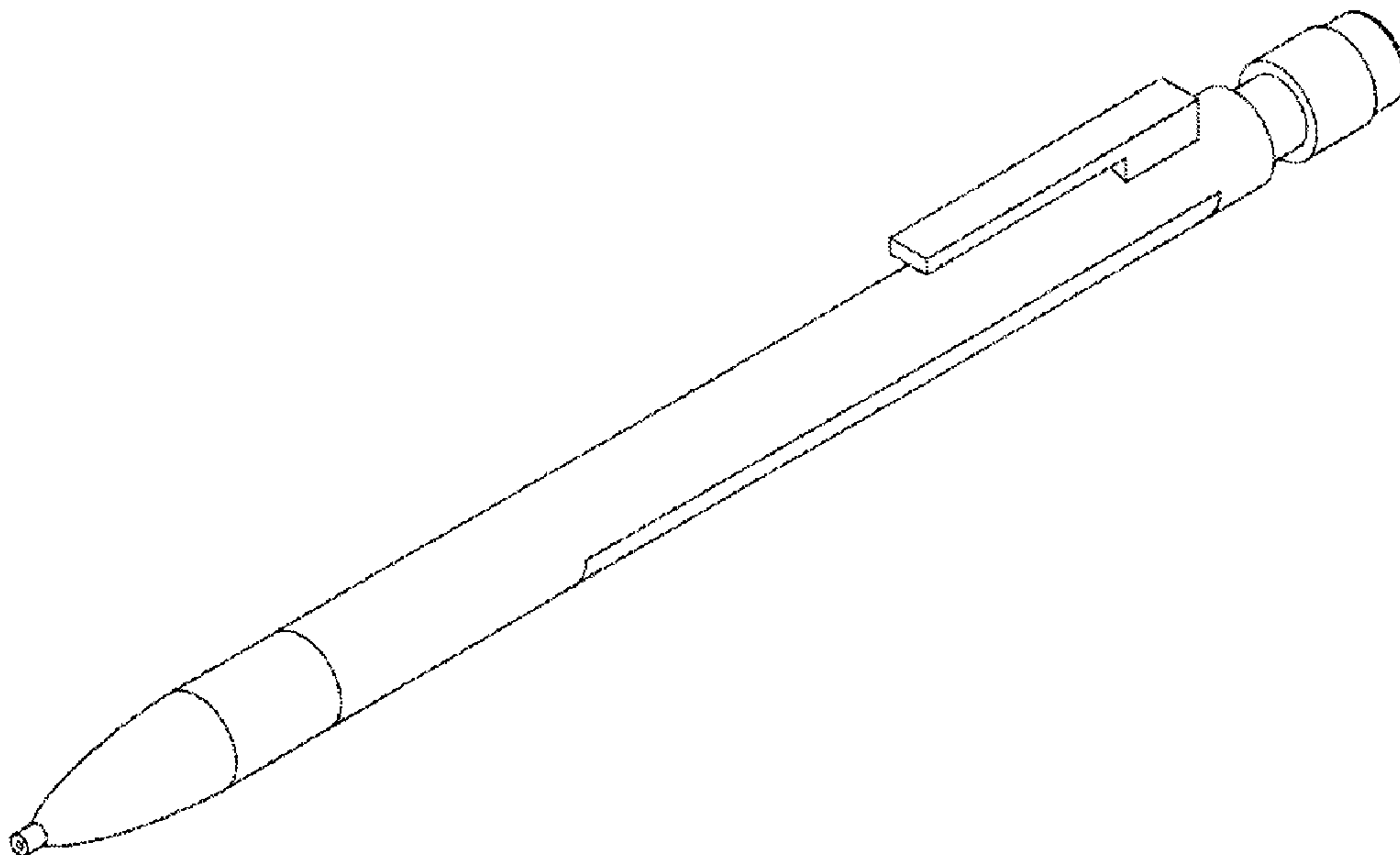
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(54) Titre : INSTRUMENT D'ECRITURE AVEC REGLE

(54) Title: WRITING INSTRUMENT WITH RULER



(57) Abrégé/Abstract:

This measuring and writing instrument may be used to accomplish a plurality of functions using a singular tool. It facilitates the measuring of distance and the drawing of straight lines with a semi-detachable measuring tool. The assembly system includes: a tension cord connecting the measuring tool to the writing utensil, a ruler member mounted to the marking instrument by magnetic means and the tool comprises of distance markings in at least one unit of measurement. The measuring tool is incorporated into the outer most shell of the writing tool.



Abstract

This measuring and writing instrument may be used to accomplish a plurality of functions using a singular tool. It facilitates the measuring of distance and the drawing of straight lines with a semi-detachable measuring tool. The assembly system includes: a tension cord connecting the measuring tool to the writing utensil, a ruler member mounted to the marking instrument by magnetic means and the tool comprises of distance markings in at least one unit of measurement. The measuring tool is incorporated into the outer most shell of the writing tool.

Description

Background of the Invention

This invention, entitled "pencil/ruler" is a new and useful type of measuring and writing instrument that may be used to accomplish a plurality of functions using a singular tool. These functions include, but are not limited to use as a ruler, writing instrument, and a measuring tool.

This invention relates generally to drafting instruments and more specifically to multifunctional drafting instruments. This invention comprises a single writing tool that has integrally attached to its body a measuring device.

10 The present invention has applications in the drafting industry, as well as the education, construction, carpentry, fine arts, graphic arts, and crafts industries, where there is a need for a handy tool for quick and easy measuring of surfaces and visibly marking.

Hence, when a construction worker, carpenter, dramatic set and fashion designer, draftsman, draftsman, or the like, needs to make an inscription or measurement the task would require the use of a plurality of instruments or would be a multi-step process can now be done with the use of one tool, the pencil/ruler. It was desirable to provide a system which does not require the acquisition and manipulation of a variety of different tools. It is therefore an object of this invention to provide a complete system that affords the user the ability to write, underline, and measure with one single tool.

20 In prior art, the combination of protractors, compasses, and ruler function in current drafting tools are cumbersome to use. They almost always require an attachment to a hard flat surface with the help of a suction cup or other means, and an additional writing tool such as pen or pencil that may be placed within the holder. The current design incorporates the ruler function and the writing utensil in one tool. The prior art provided complicated, inflexible, multi-component instruments that are expensive to manufacture and difficult to use. None of the prior art has a writing utensil with a ruler integrated to its body. Thus, providing for a simple, yet effective, inexpensive stationery tool that is easy-to-use, and easy to fit in a shirt pocket.

30 Limited combinations of various drafting tools are shown in the prior art. For example, US 2003/0154608 A1 discloses a multi-functional drafting instrument that functions as a protractor, compass, and ruler. However, it is suited only for flat surfaces and requires the input of a writing device.

U.S. Pat. No. 2,508,372 discloses the combination of a pencil with a flexible ruler lodged within the barrel of the pencil. However, this tool does not allow for the simultaneous use of the ruler and the pencil. Our design incorporates the ruler as part of the shell (barrel).

U.S. Pat. No. 5,497,558 discloses a drafting instrument that functions as a protractor, compass, T-square and ruler. It uses a suction cup to hold on to the writing surfaces, which limits its use to only hard surfaces such as dry erase boards, chalkboards and tables. The instrument also cannot hold the writing tool for carrying purpose as well as drawing parallel lines requires help with additional instrument.

40 U.S. Pat. No. 3,378,927 discloses a drafting implement which can draw parallel lines on the blackboard and strike arcs about a center located near the edge of a blackboard. However, the device disclosed requires thread construction and requires the input of a writing device. Further, the device of U.S. Pat. No. 3,378,927 is manufactured with at least ten different parts.

U.S. Pat. No. 5,915,807 discloses an all-in-one drawing apparatus has a protractor integrated with horizontal and vertical rulers, but its use is limited to drawing board only and requires a writing instrument.

U.S. Pat. No. 6,467,179 B1 discloses a measuring and drafting tool that functions as a ruler, straight edge, T-square, square or squaring tool, center gage, an edge transcribing and duplicating tool, and as a tool for striking circles and circle arcs. However, this tool is necessitates the input of a writing device and is large and bulky.

10 Such devices have drawbacks; inability to use the pencil and the ruler simultaneously, susceptibility toward breaking after repeated bending, or the incapacity to stow a device when not in use.

Thus, there is a need for a simple, yet effective, inexpensive drafting instrument that combines the functions of a writing instrument and ruler in one simple easy-to-use instrument.

Summary of the Invention

Our invention comprises a combination between: a writing tool; named as primary tool, and a ruler; referred as secondary tool. Said ruler is embedded to the writing tool's surface by using magnets that attach it to the writing tool, allowing an integration of both tools in one instrument, but yet permitting the ruler being detached from the writing tool. The purpose of the magnet is to hold the ruler in place whilst not being used simultaneously with the writing tool.

20 The ruler features a curved shape that contours the writing tool's surface, and the writing tool is designed in a way that it allows the perfect integration of both tools in one whole instrument.

The ruler and the writing tool can be detached as mentioned but yet they cannot be fully separated in two pieces as the writing tool possesses a tension cord mechanism which keeps the ruler and the mentioned tool always linked.

The tension cord connects one end of the ruler to the rest of the body of the writing tool. The tension cord mechanism can be located anywhere along the body of the writing tool, in most cases it will be located between the two layers of plastic that form the body of said writing tool as described in FIGURE 6.

30 The main feature of the described instrument is to be able to draw straight lines using the ruler and writing tool simultaneously. This can be done by simply detaching the ruler from the primary tool and easily reattach it by using the aforementioned mechanisms.

Brief Description of the Drawings

FIG. 1 is a general tri-dimensional view of the device.

FIG. 2 is a top view of the device

FIG. 3 is a bottom view, where figure labelled as "A" is the measuring tool.

FIG. 4 is the side view of the device, where figure labelled as "A" corresponds to the measuring tool.

FIG.5

Fig. 5A is the front view;

Fig. 5B is the back view.

FIG.6 is a length cross section showing the mechanism of how the second layer of plastic narrows to allow the tension cord to coil around it, labelled "Section C-C".

FIG.7

Fig. 7A is a radial cross section;

Fig. 7B is the side view

FIG.8

Fig. 8A is the bottom view of the device with the measuring tool completely removed.

10 Fig. 8B is the side view of the device with the measuring tool completely removed.

Fig. 8C is a view of the measuring tool standing on its own.

FIG.9

Fig. 9A is the bottom interior view of the measuring tool.

Fig. 9B is the exterior view of the measuring tool.

Fig. 9C is a front/back view of the measuring tool.

Fig. 9D is a side view of the measuring tool.

Detailed Description of the Preferred Embodiment

Referring to FIGURE 1, 2, and 5, the primary writing tool will be described. The embodiment is of a simple push-enabled writing instrument with integrated measuring tool labelled A in
20 FIGURE 3 and 4. The design could be easily transferred to any other writing device of non-push mechanism. The clip can be considered ornamental and is not essential in the design of the tool.

Referring to FIGURE 3 and 4, the secondary measuring tool, highlighted A, will be described. The measuring tool is placed closer to the butt end of the writing tool so that the writing tool can still be used comfortably whilst the measuring tool is semi-detached from the writing tool. The measuring tool can be seen in its complete embodiment in FIGURE 8C and 9. The curvature of the measuring device conforms to the outer most shell of the writing tool. The outer shell of the primary writing tool and the measuring tool are more practical as a transparent plastic; however, other durable and rigid materials could be used (such as: metals, metal alloys, and ceramics).
30 The measuring markers would be placed along the length of the measuring device, where each individual measurement mark would follow the radial curvature of the measuring device.

Referring to FIGURE 6, the permanent connecting device between the two tools will be described. A tension cord, that is permanently attached coiled around the axis of the primary writing tool, is connected to the inner surface of the measuring tool as seen in FIGURE 8B and 8C. The cord can be released from the axis when force is pulling the measuring tool away from

the writing tool. Once the force is released, the cord will re-coil itself around the axis of the writing tool. To further keep the measuring tool in place, when not in use, a secondary mechanism (such as a magnet) keeps the measuring tool in contact with the outer shell of the writing tool. The secondary mechanism could be replaced with Velcro, clips, or other devices with similar purposes. To make for easier removal of the measuring tool from the writing tool, the two could be made from slightly different materials; with one having a higher coefficient of friction.

Referring to FIGURE 7, the different shells of the device will be described. There should be at least two shells throughout the whole device. Additional shells can be incorporated to refine the design. A section of the outer most shell is semi-removable as mentioned in the aforementioned paragraph, which is in itself the measuring tool.

It will be apparent to one skilled in the art that modifications may be made to the illustrated embodiment without departing from the spirit and scope of the invention as defined by the Claim

Claims:**Claim 1**

A device comprising a primary writing tool; and a secondary tool which allows for the primary tool to mark around the edge of the secondary tool in a tracing manner; where a mechanism keeps the primary tool and secondary tool permanently attached while still being detachable.

Claim 2

The device as defined in Claim 1, wherein the shell(s) of the primary tool comprises layers of plastic.

Claim 3

The device as defined in Claim 1, wherein the measuring tool comprises a primary body having a surface that contours the surface of the writing tool; and edges to create lines with the writing tool or other writing devices; and measurement marks along at least one edge of the measuring tool.

Claim 4

The device as defined in Claim 1, wherein the mechanism comprises a tension cord to allow for the retraction of the secondary tool from the primary tool.

Claim 5

The device as defined in Claim 1, wherein the mechanism further comprises a surface mechanism to allow the secondary tool to remain attached to the primary tool.

Claim 6

The device as defined in Claim 2, wherein the diameter of one or more of the inner shell layers varies at one or more points along the length of the primary tool.

Claim 7

The mechanism as defined in Claim 5, wherein the surface mechanism comprises a magnet, clip, and Velcro.

Claim 8

The device as defined in Claim 4, wherein the mechanism coils around an inner shell of the primary tool's shell as mentioned in Claim 6.

Claim 9

The device as defined in Claim 4, wherein said mechanism allows said device to perform simultaneous markings and measuring; whereby the primary tool and the secondary tool remain connected by the tension cord.

Drawings

FIGURE 1

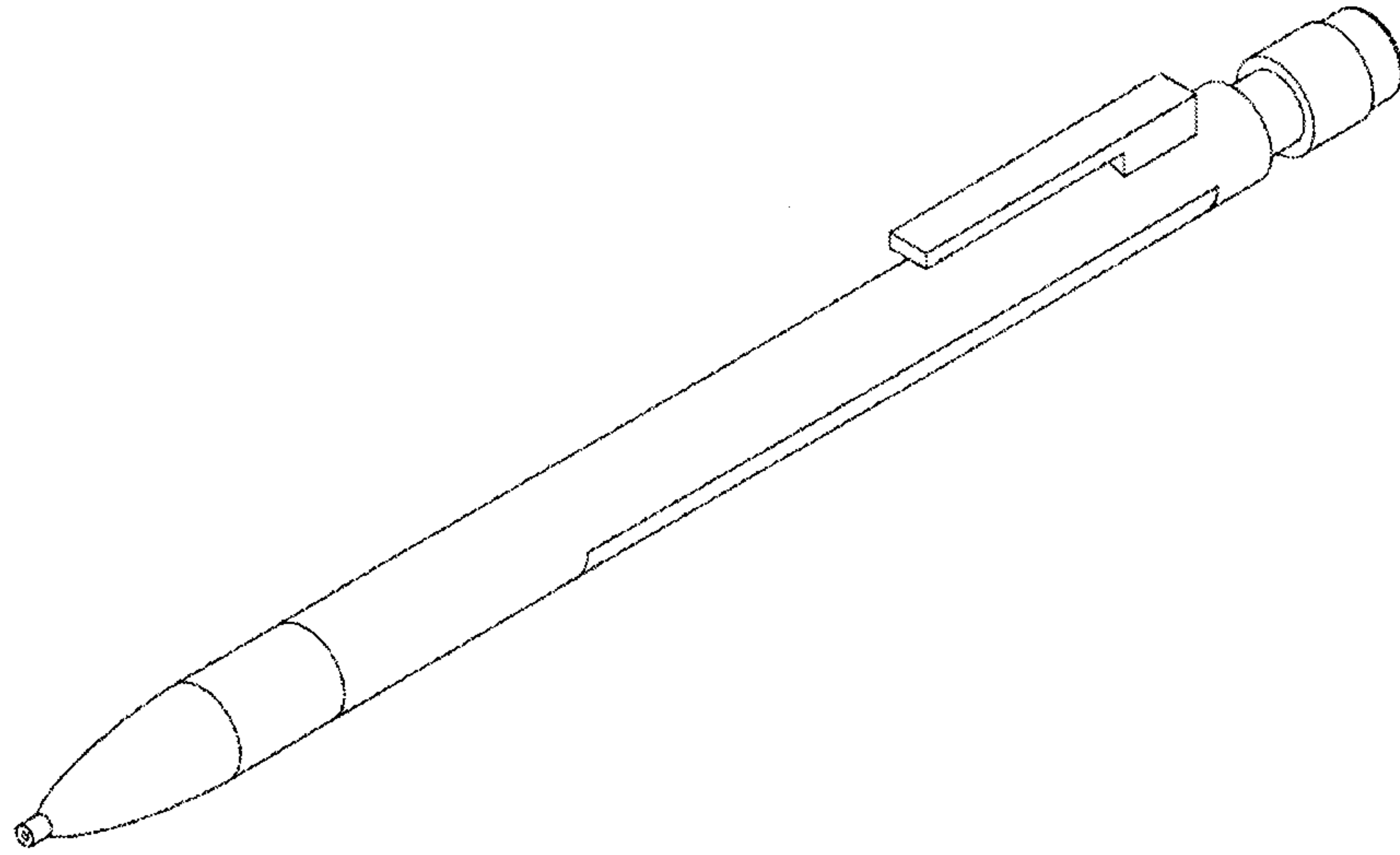


FIGURE 2

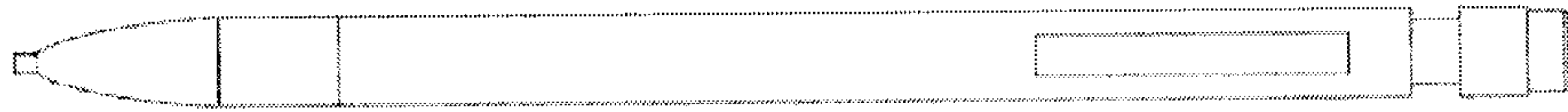


FIGURE 3

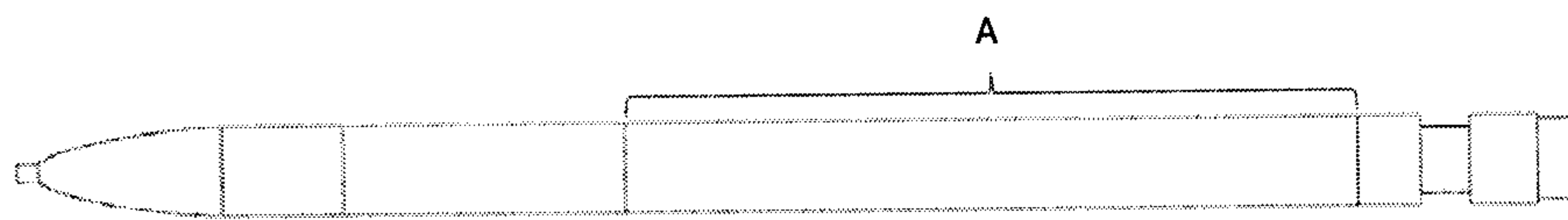


FIGURE 4

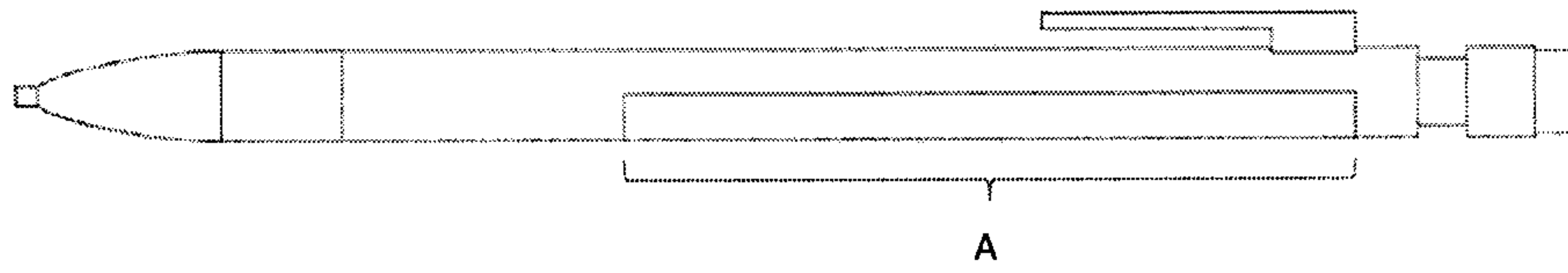
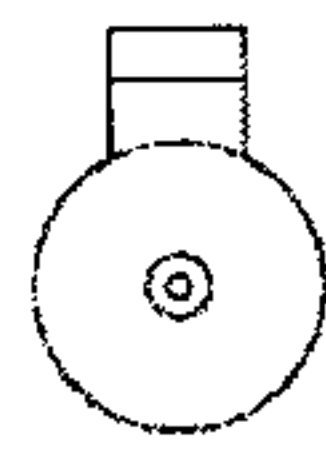


FIGURE 5



5A



5B

FIGURE 6

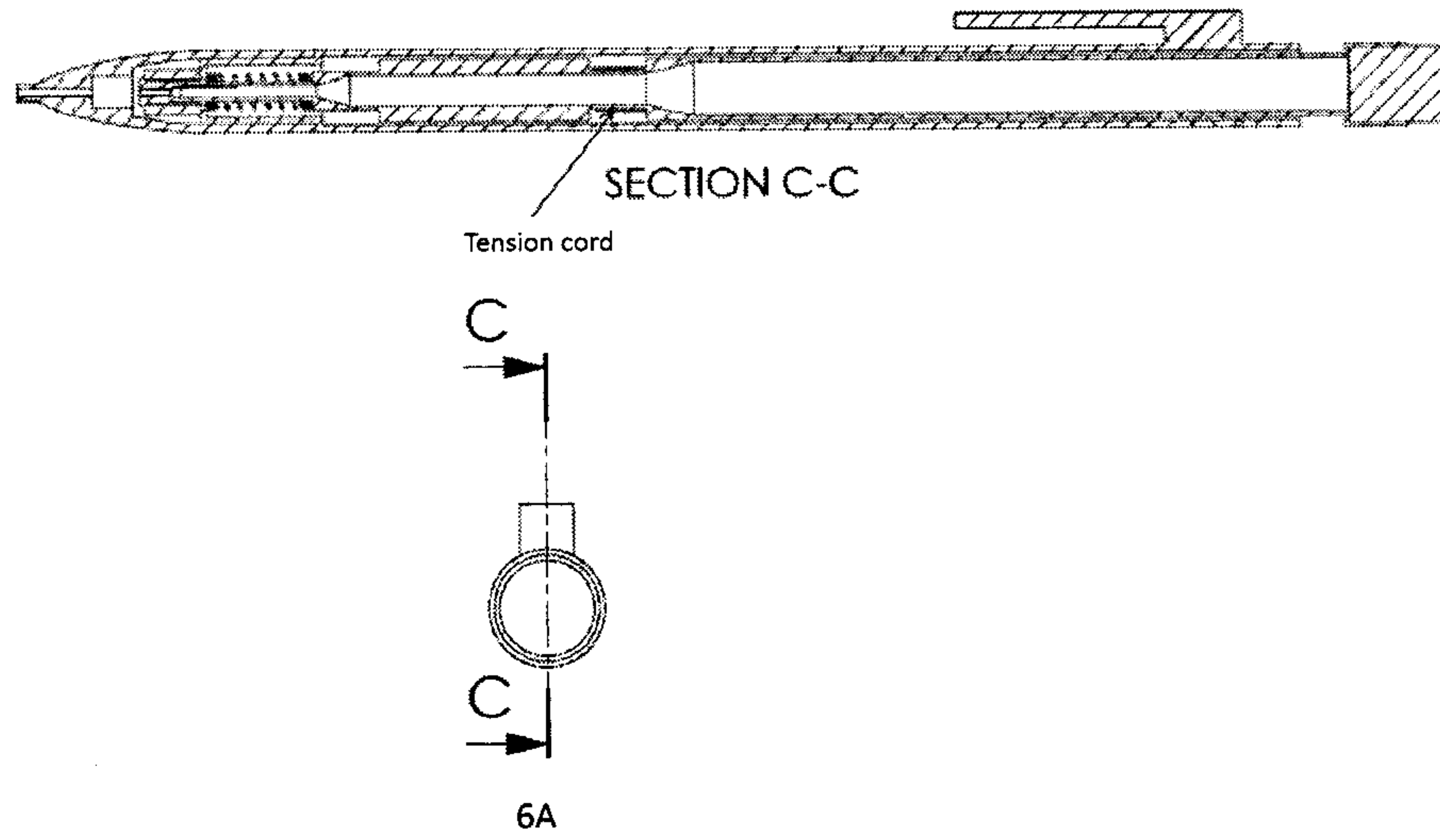


FIGURE 7

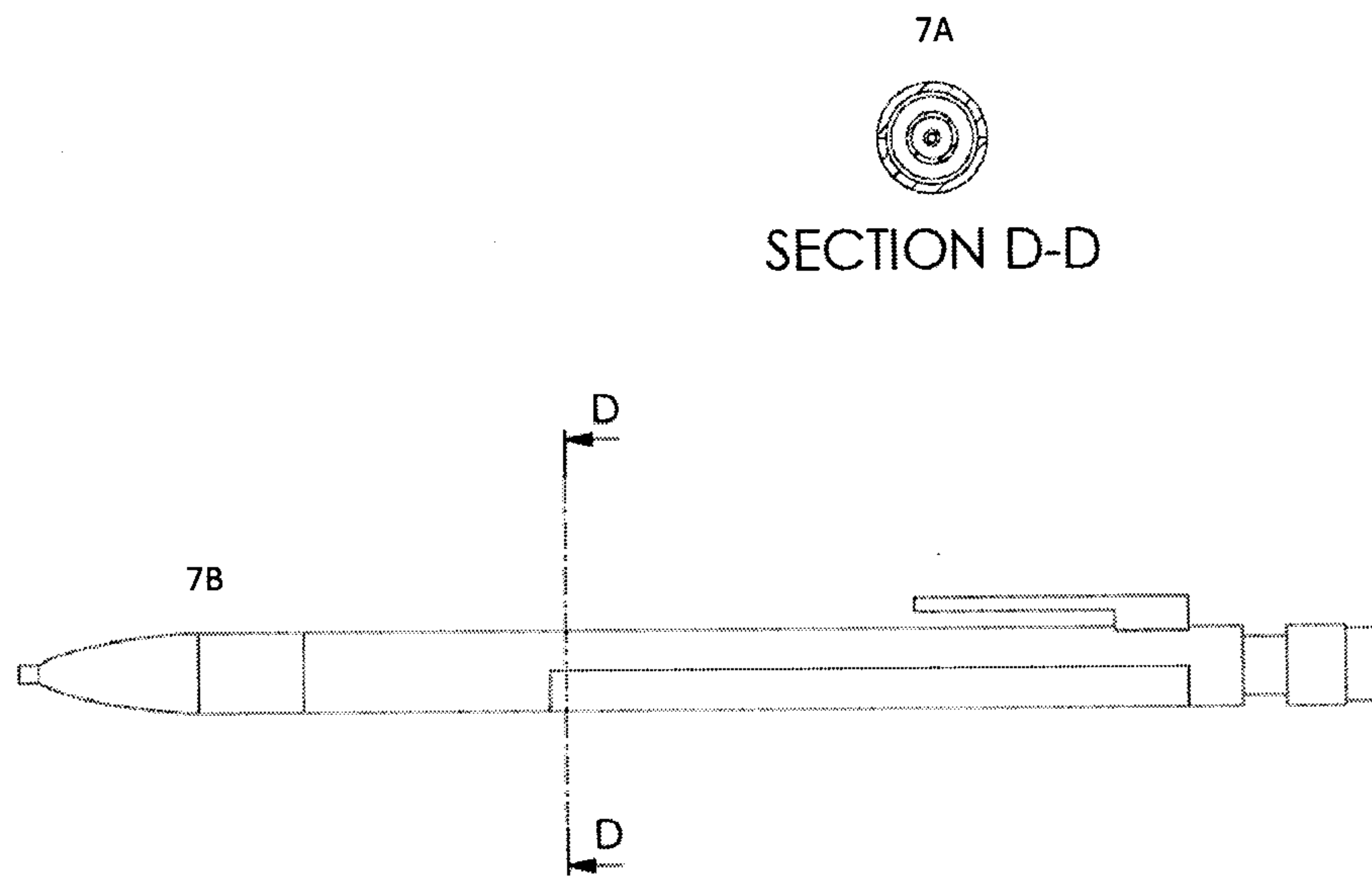


FIGURE 8

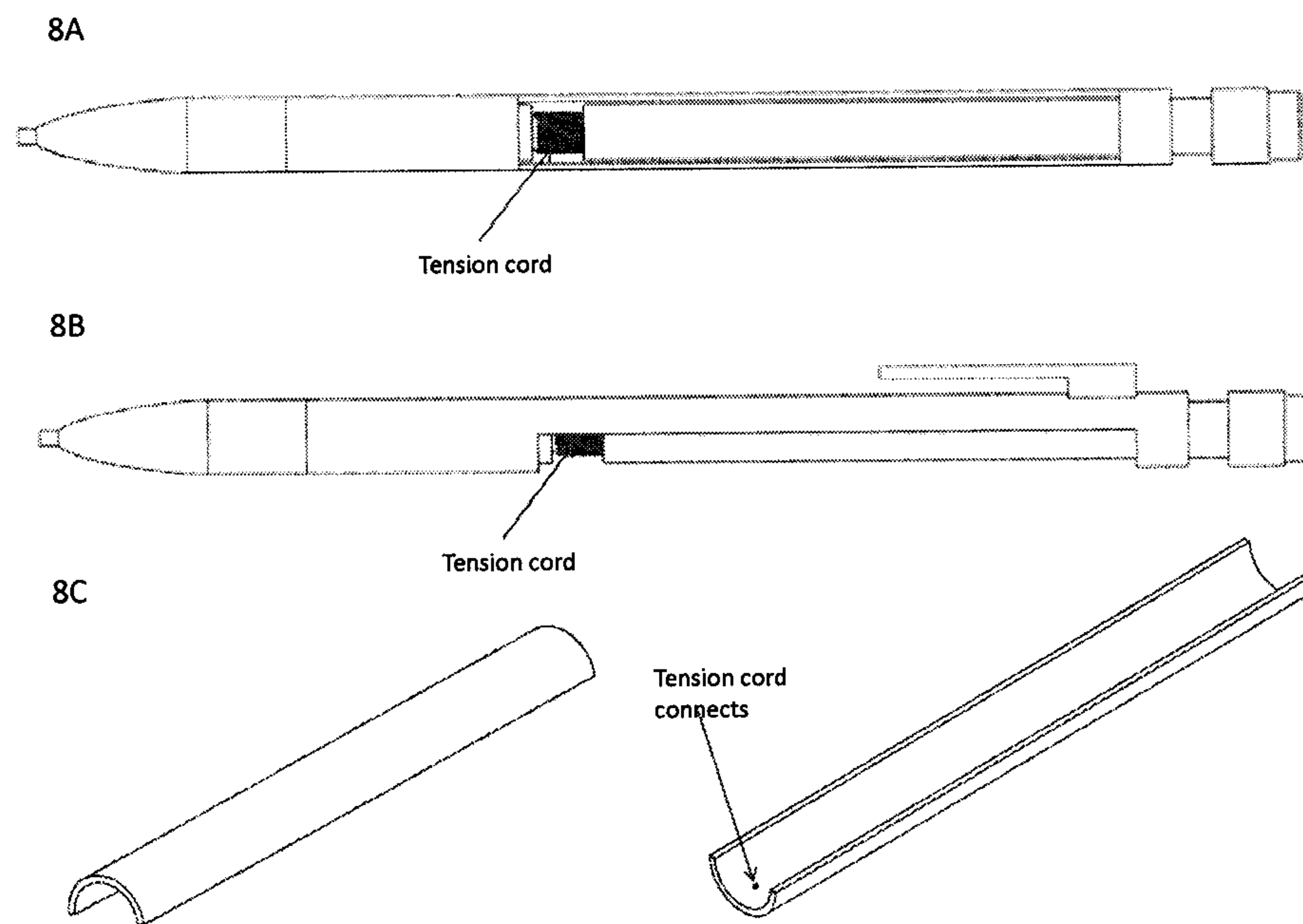


FIGURE 9

