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(12) **United States Patent**
Briggs

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(54) **BALLPOINT DOT PEN TATTOO CARTRIDGE**

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(21) Appl. No.: **18/302,722**

(57) **ABSTRACT**

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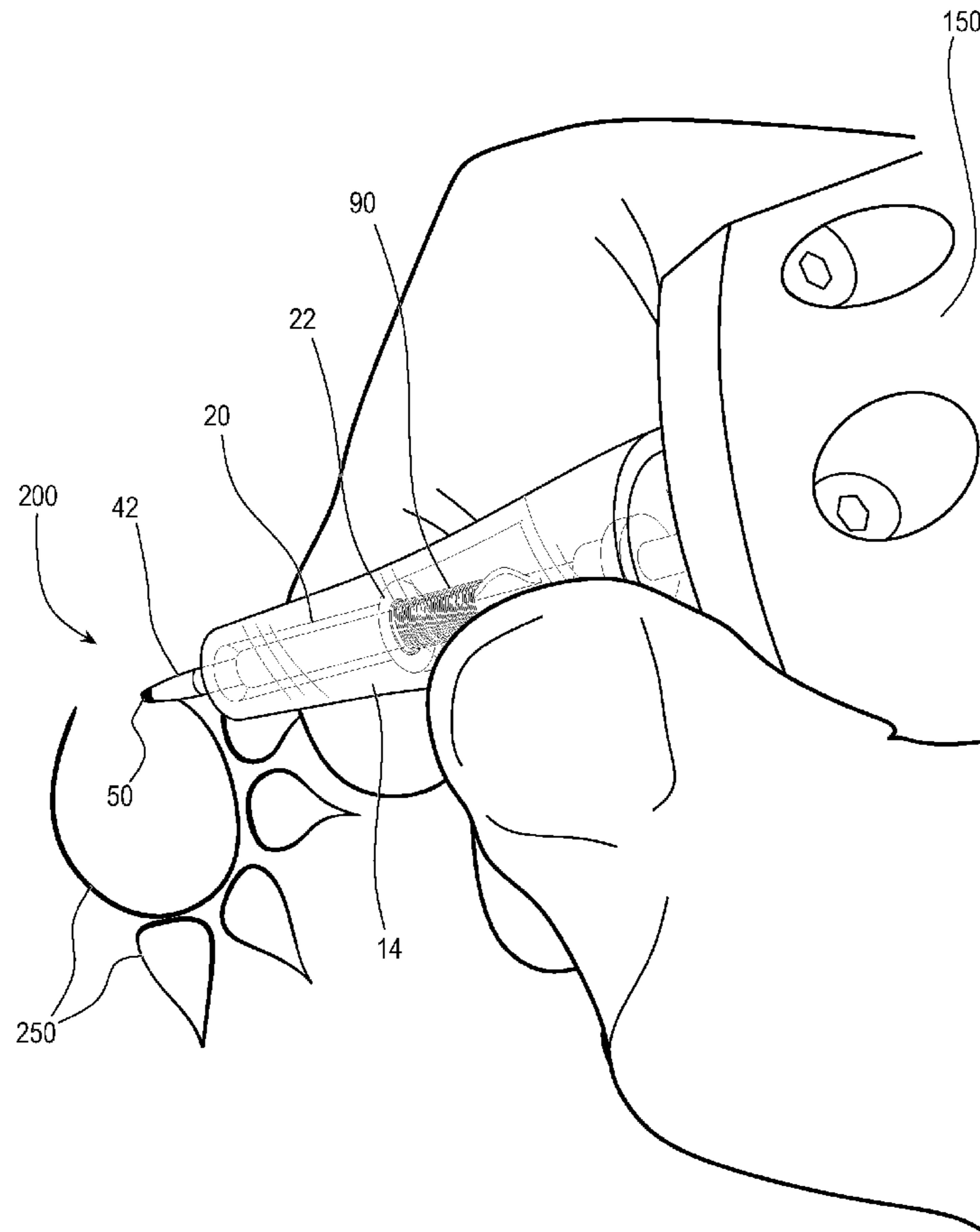
A ballpoint dot pen tattoo cartridge includes a ballpoint pen element comprising an ink reservoir housed within a tapered bottom barrel providing a first barrel aperture and flanged top surface. A second barrel aperture in cylindrical top of the barrel includes a diameter larger than the first aperture with an assembly to attach the barrel cylindrical top to a tattoo machine. A resilient element within the barrel is sized to receive the ballpoint pen element between the first barrel aperture flanged top surface and two equal sized tabs on the ballpoint pen providing exit and retraction of the ballpoint pen assembly for ink discharge from the cartridge barrel tapered bottom whereby a tattoo machine operator controls the driving actuation of the tattoo machine to the ballpoint pen tip for controlling inked markings of a material.

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B43K 7/02 (2006.01)
B43K 7/10 (2006.01)

(52) **U.S. Cl.**
CPC . **B43K 7/02** (2013.01); **B43K 7/10** (2013.01)

(58) **Field of Classification Search**
CPC ... B43K 7/02; B43K 7/10; B43K 5/16; B43K 5/165; B43K 7/12; B43K 24/02; B43K 24/04; B43K 24/06; B43K 24/08
USPC 401/109–112, 116, 117; 81/9.22
See application file for complete search history.

5 Claims, 3 Drawing Sheets



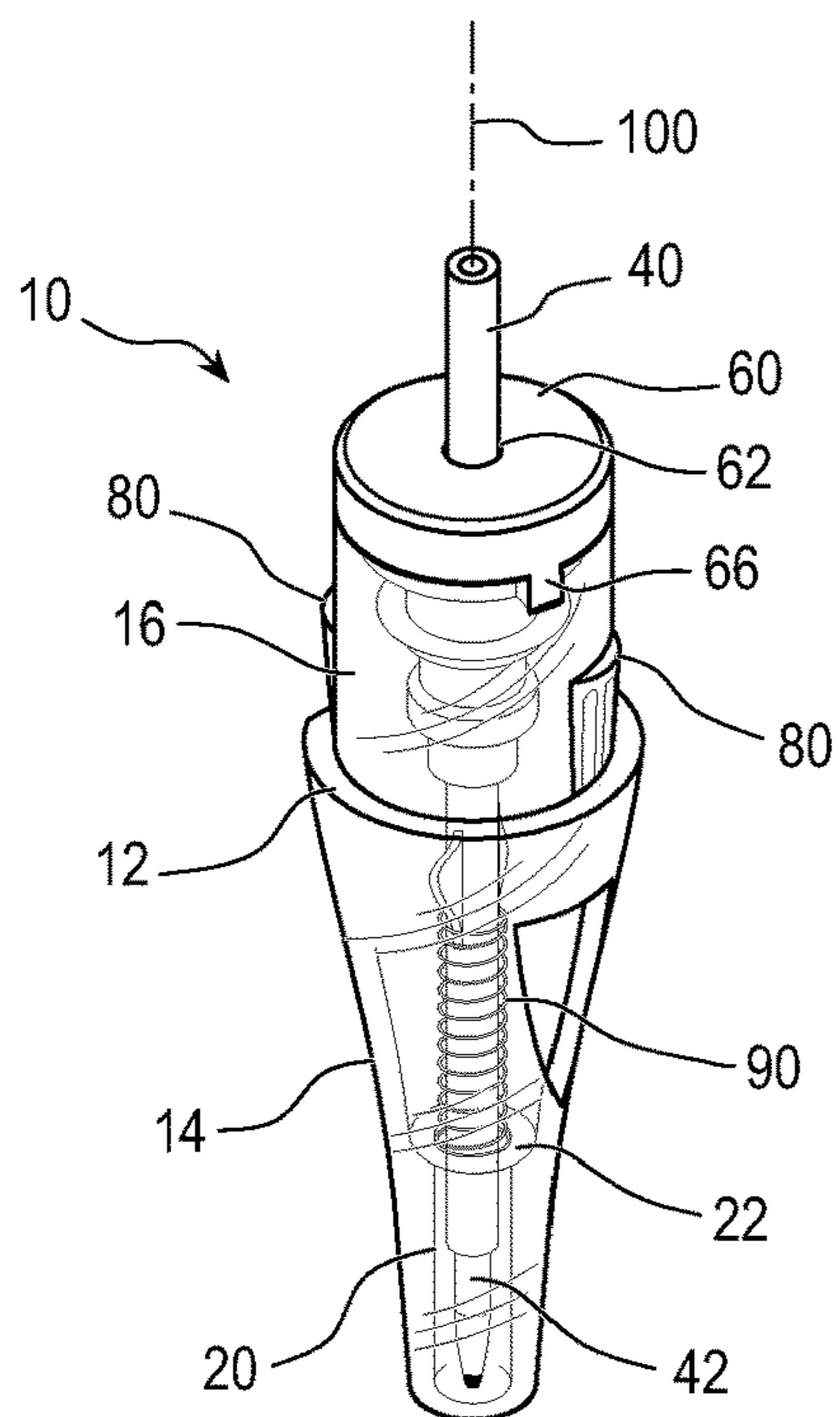


FIG. 1

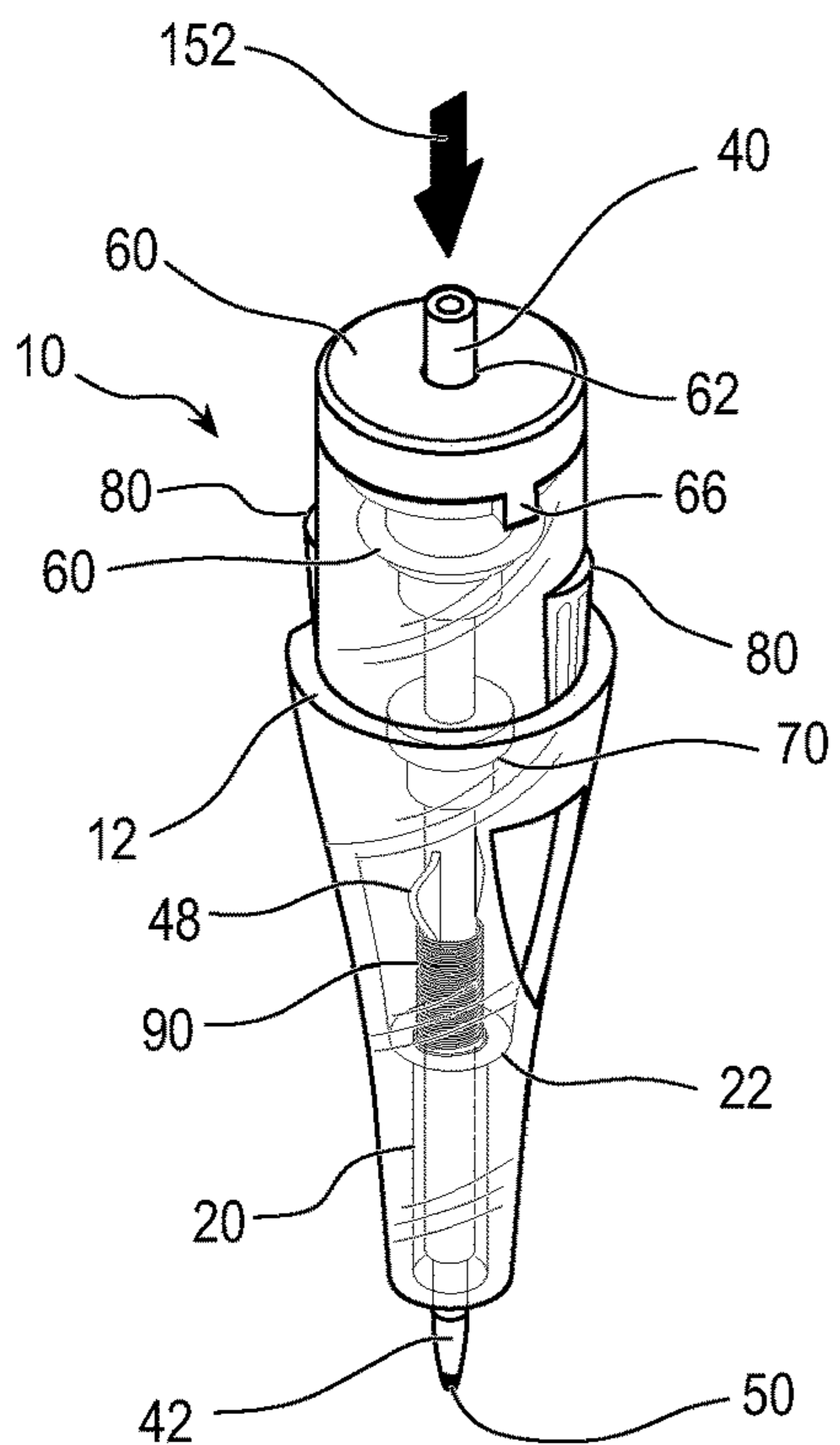
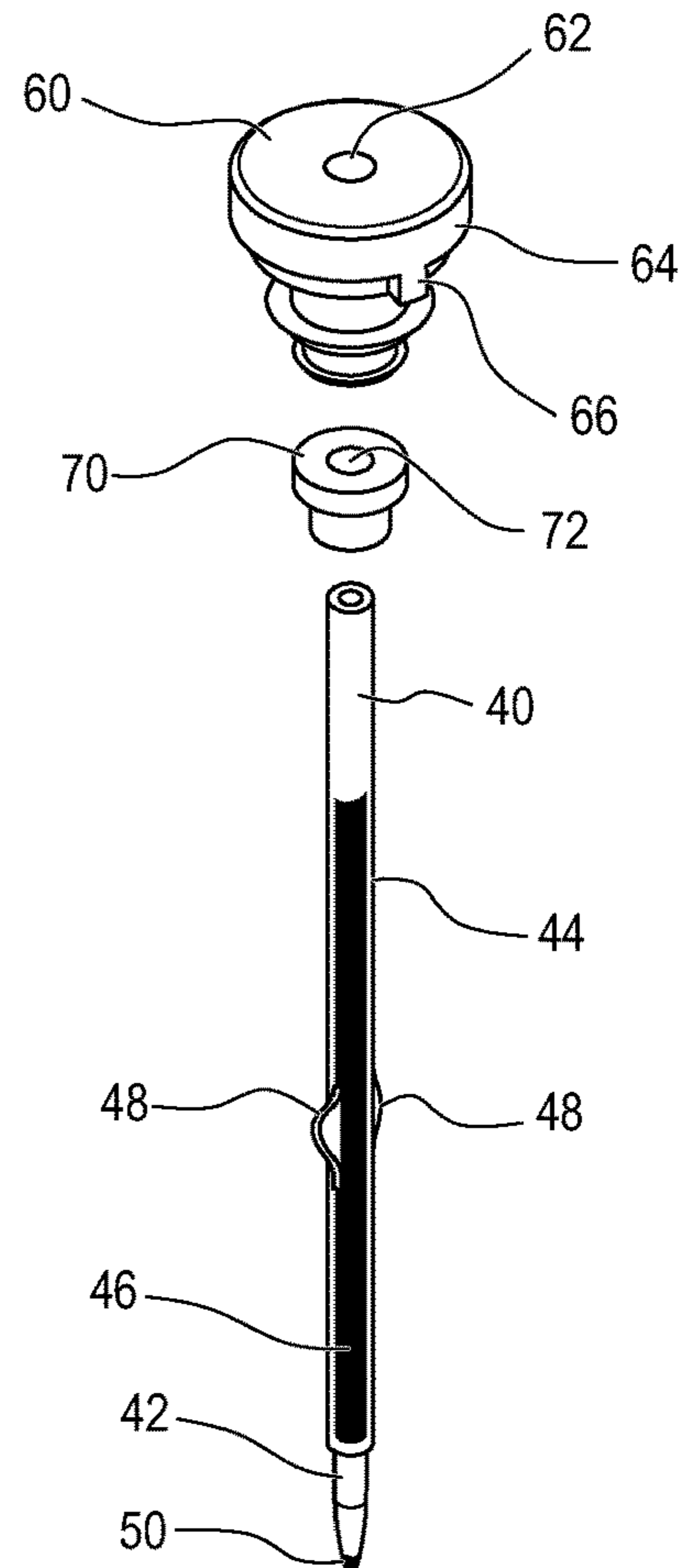


FIG. 2

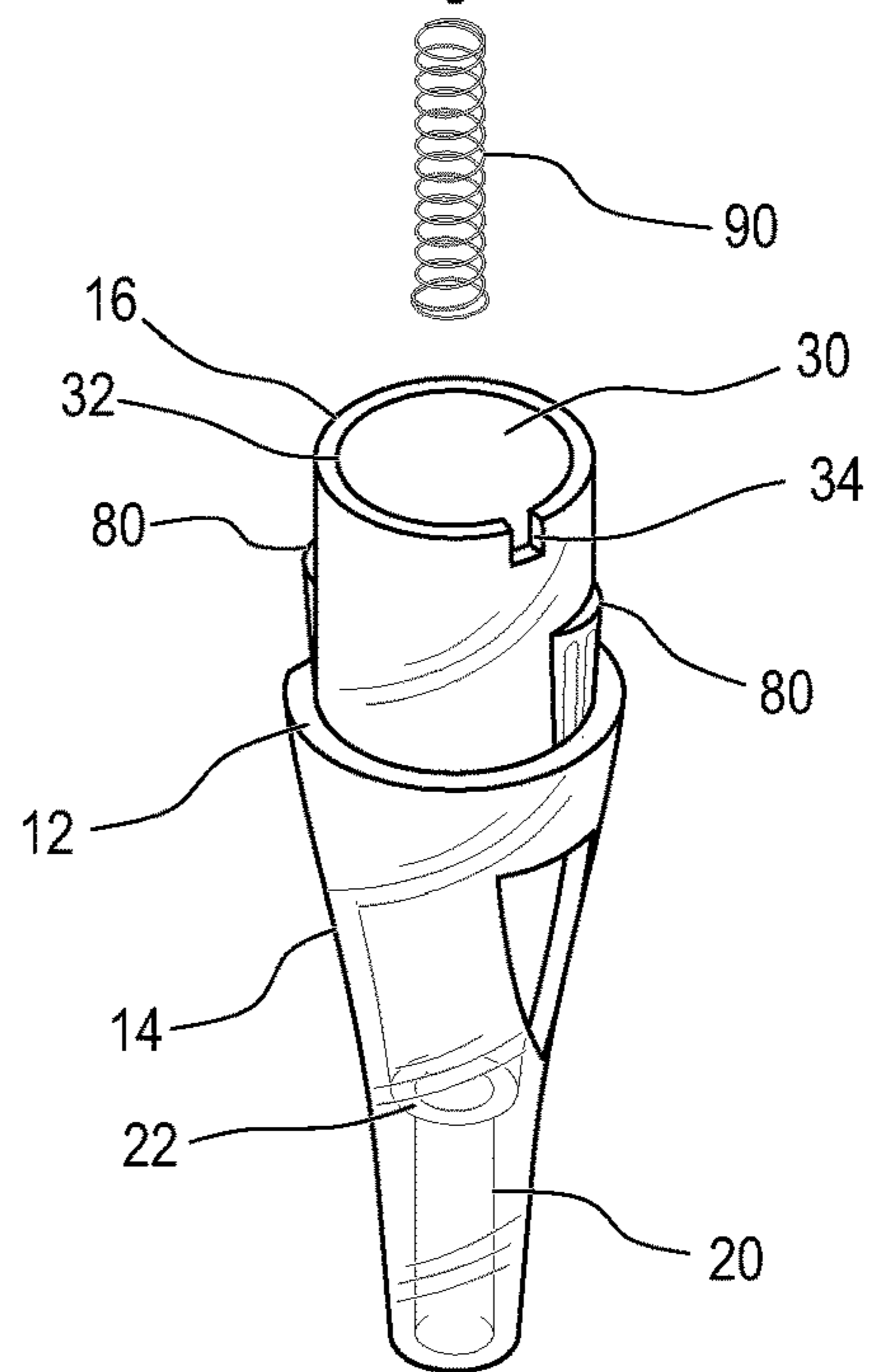


FIG. 3

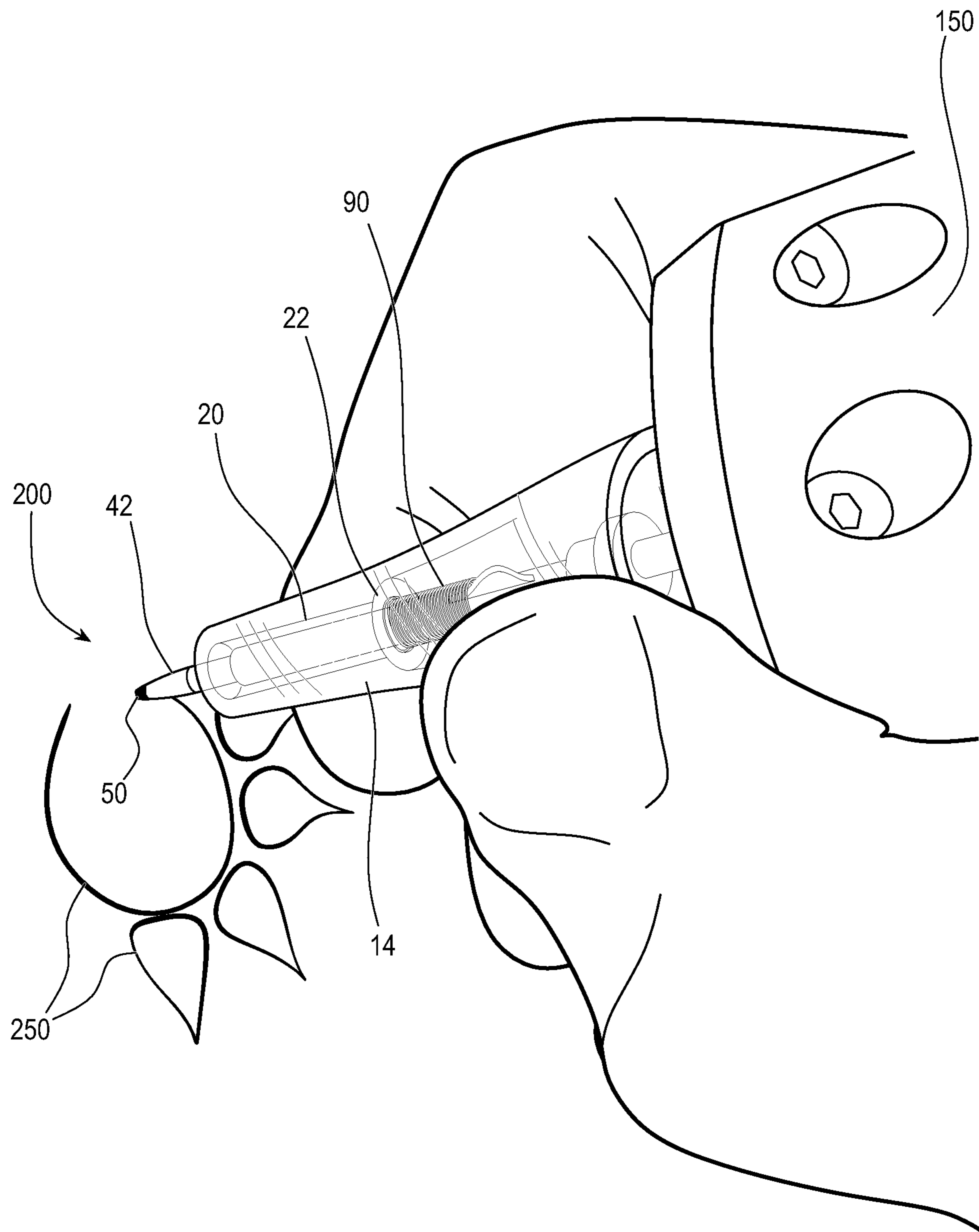


FIG. 4

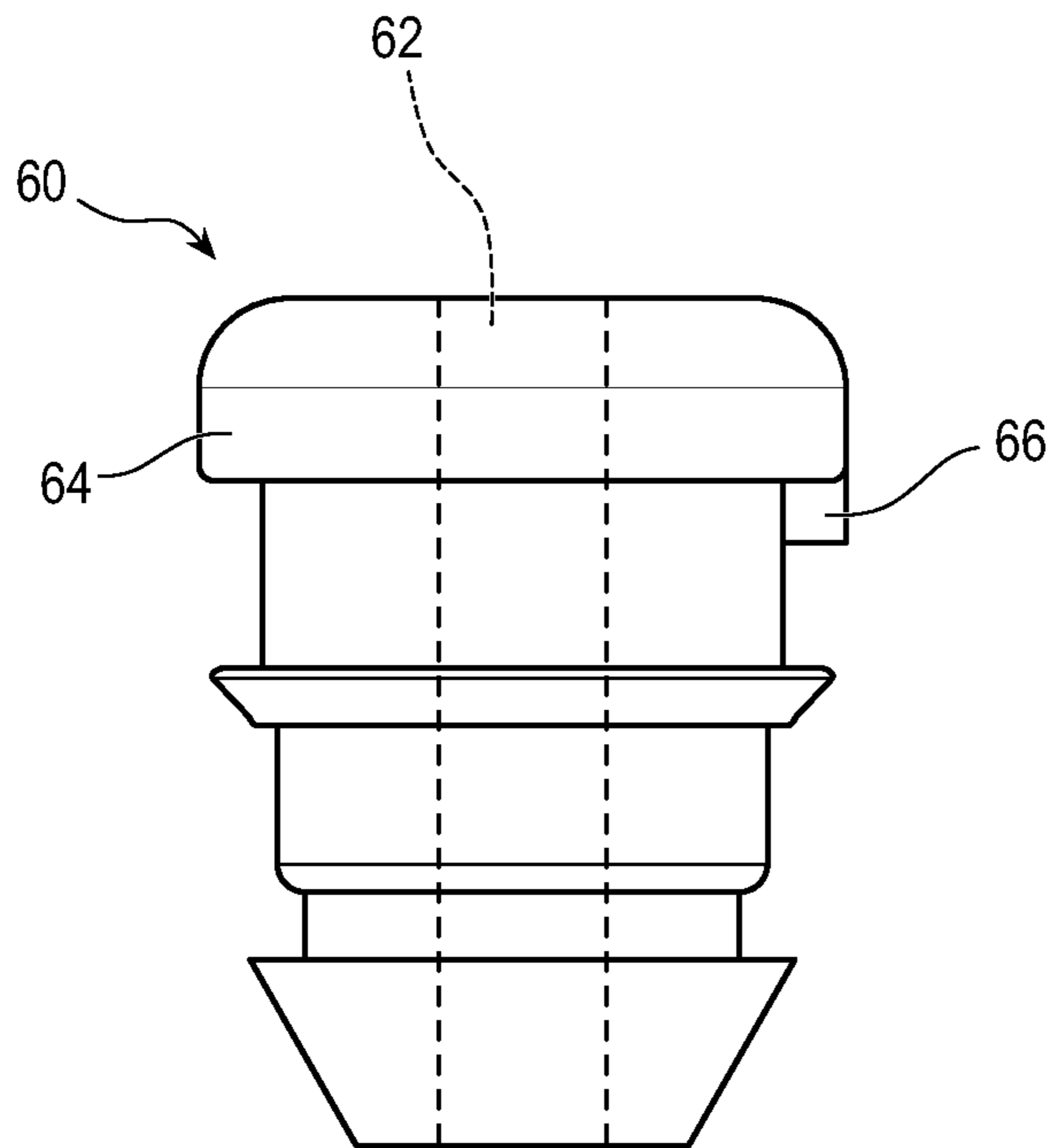


FIG. 5A

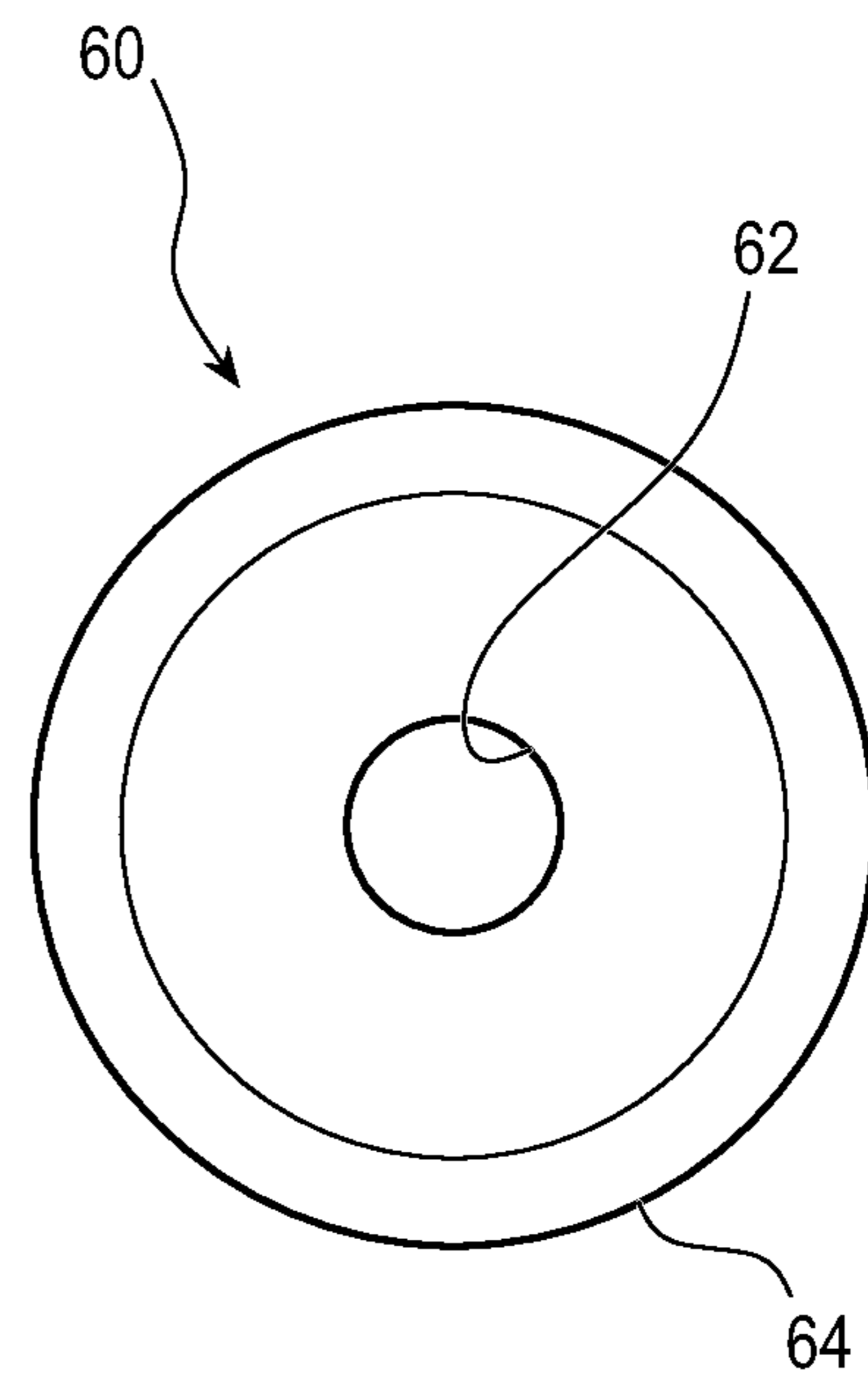


FIG. 5B

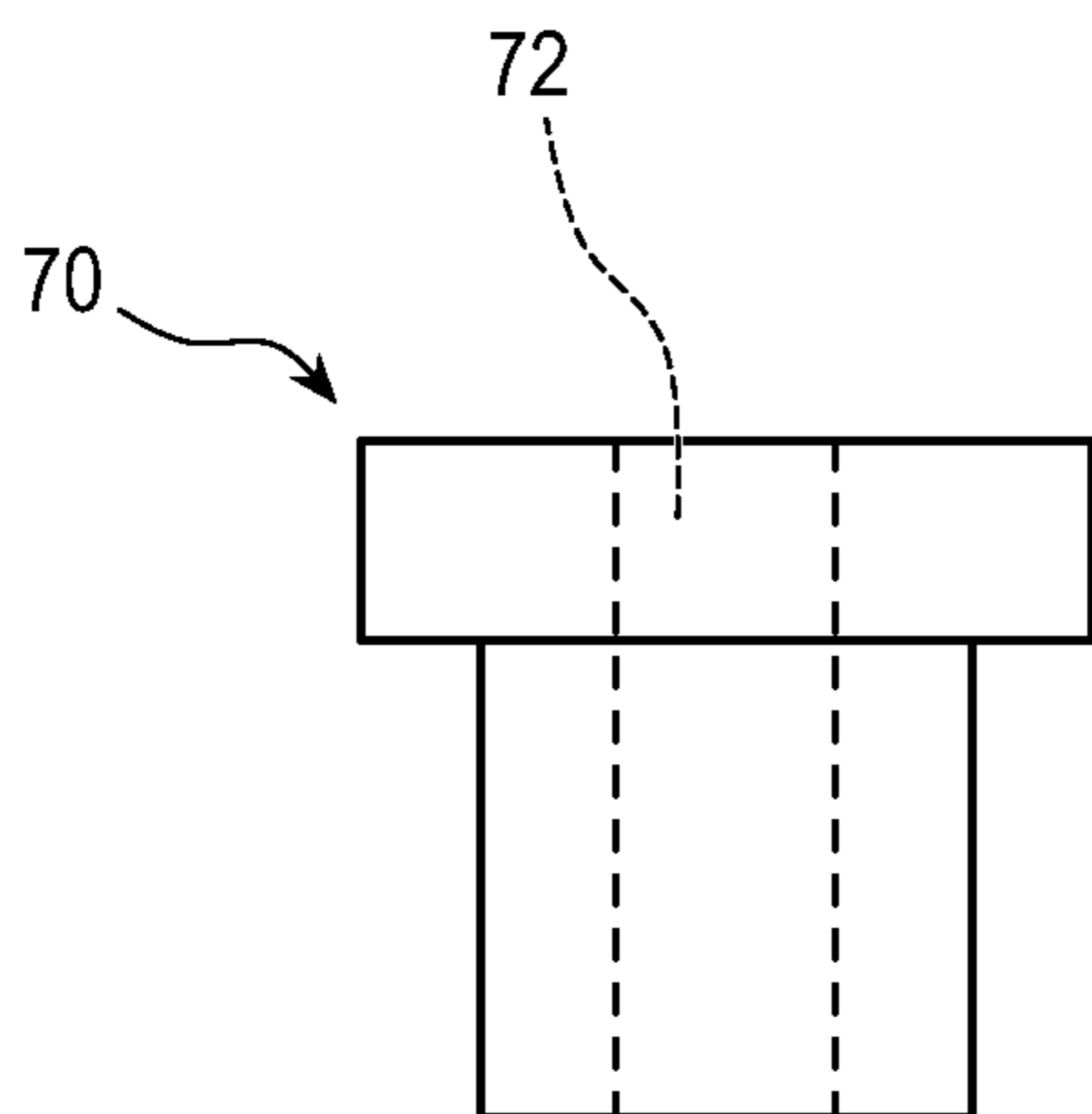


FIG. 6A

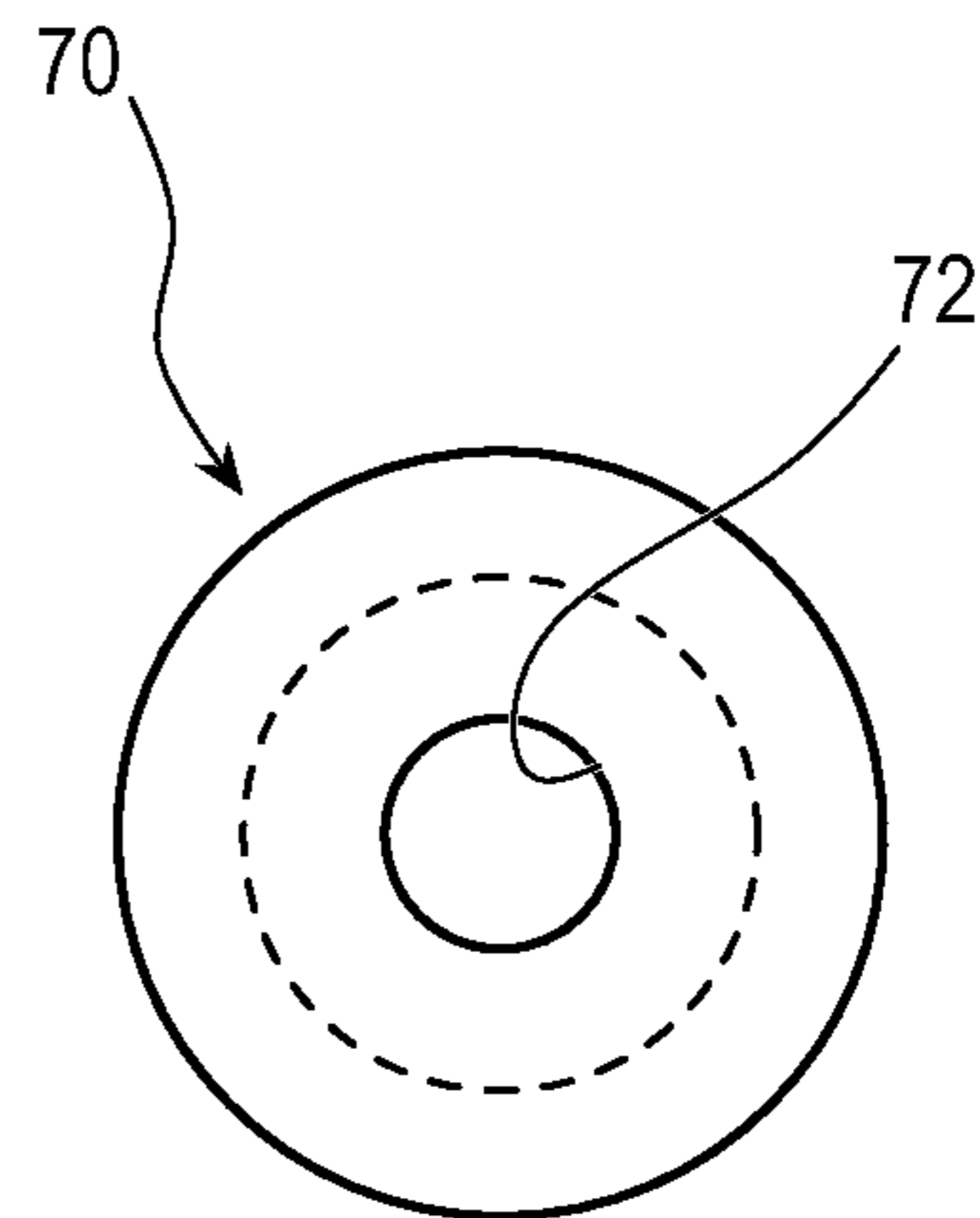


FIG. 6B

1**BALLPOINT DOT PEN TATTOO
CARTRIDGE****CROSS-REFERENCES TO RELATED
APPLICATIONS**

This United States non-provisional patent application is based upon and claims the filing date of U.S. provisional patent application Ser. No. 63/435,198, filed Dec. 23, 2022.

BACKGROUND

Field of the Invention

The invention relates to a ballpoint dot pen tattoo cartridge.

Background

There are various means for using a tattoo machine on paper. Some of these devices attempt to provide tattoo machine users with a product that allows for their machines on paper, but these solutions fail to meet the needs of the industry because not all versions of these products are manufactured. Therefore, there is not enough supply to meet demand. All versions of this product are expensive when they should be affordable and accessible to anyone. Other expensive versions can be found only abroad, while less durable versions still cost upwards of \$50 to \$80 wholesale. Other products attempt to offer a practice tool to new students of tattooing or art enthusiasts, but these products cannot meet the needs of the industry since the process of use is not similar enough to the actual process of tattooing. New tattoo artists lack experience in correct practice for tattoo machine control. Still, other products seek to offer a useful art tool and practice tool, but these also fail to meet industry needs because no products are manufactured. Thus, there is not enough supply to meet the demand.

SUMMARY OF THE INVENTION

It would be desirable to have a ballpoint pen in a tattoo cartridge to allow for practice on paper with a tattoo machine. It would be desirable to have a device that gives tattoo artists the ability to create art on paper with their tattoo machine. Still, further, it would also be desirable to have a device that provides the beginner tattoo artists the tactile feedback of how it feels to use a tattoo machine on paper before using it on artificial or real skin. The disclosed device advantageously fills these needs and addresses deficiencies in existing products by providing a practice tool and new way of using a tattoo machine on paper to create art. The ballpoint pen in a tattoo cartridge allows the tattoo artist to use their personal machine to enhance their tattoo services skill. The disclosed ballpoint dot pen tattoo cartridge is the perfect tool for any tattoo apprentice or professional as it instills muscle memory for better hand control and allows the tattoo artist to practice and learn techniques used in tattooing for example, pendulum, whip, or stipple shading.

Disclosed is a ballpoint dot pen tattoo cartridge, which includes these components: a cartridge cap, a ballpoint pen, resilient spring, and cartridge casing. These components are assembled with the cartridge cap clicked into the top of the cartridge casing. A hole centered on the cap and extending along a cartridge casing longitudinal axis equals the diameter of the ballpoint pen, allowing the ballpoint pen to move freely up and down within cartridge casing, and to extend

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from and retract into the cartridge casing. In an embodiment, a resilient spring is fixed to the ballpoint pen and allows the ballpoint pen to move up and down within the cartridge casing without falling out of the cartridge casing. This embodiment cartridge casing fits into a tattoo machine and contains the cartridge casing cap, resilient spring, and ballpoint pen.

Embodiments of ballpoint dot pen tattoo cartridge provide: (1) a resilient assembly element that allows for the ballpoint pen to move out of the cartridge casing and then retract into the cartridge casing; (2) a plastic attachment assembly on the top of the cartridge casing allowing for the whole ballpoint dot pen tattoo cartridge to lock into a tattoo machine; (3) a cap that clicks into the top of the cartridge casing and which holds the ballpoint pen and rubber sleeve or metal spring in the cartridge; and (4) a cartridge casing that contains the cartridge casing cap, the ballpoint pen, and the a resilient assembly, either a rubber sleeve or metal spring.

The disclosed ballpoint dot pen tattoo cartridge is unique when compared with other known devices and solutions because it provides: (1) an affordable product for tattoo enthusiasts, tattoo students or apprentices and tattoo artists; (2) a product that feels and functions like the actual tattoo needle down to the packaging; and (3) a product that is readily manufactured, providing a supply that meets existing demand from the tattoo and art communities and people who would like to learn how to tattoo.

The disclosed ballpoint dot pen tattoo cartridge is unique because it is structurally different from other known devices or products. The ballpoint dot pen tattoo cartridge provides (1) an integral tattoo cartridge configuration; (2) the ballpoint pen element is housed within the dot pen cartridge; and (3) the ability to readily adapt to a tattoo machine.

This disclosure provides a more detailed and specific description that will refer to the application drawings. The drawings and specific descriptions of the drawings, and any specific or alternative embodiments discussed, are read with this entire disclosure. The ball point dot pen tattoo cartridge may, however, be embodied in many forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided by way of illustration only and so this disclosure will be thorough, complete, and convey understanding to those skilled in the art.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a perspective view of an embodiment of the ballpoint dot pen tattoo cartridge **10** without driving actuation force on the ballpoint pen element **40** whereby the ballpoint pen element ink discharge tip **42** is retracted in the first barrel cartridge barrel aperture **20** and the integral cartridge barrel tapered bottom **14**.

FIG. 2 depicts the embodiment of the ballpoint dot pen tattoo cartridge **10** of FIG. 1 wherein the driving actuation force **152** on the ballpoint pen element **40** compresses the resilient assembly element **90** within the integral cartridge barrel **12** whereby the ballpoint pen element ink discharge tip **42** is extended from the first barrel cartridge barrel aperture **20** and the integral cartridge barrel tapered bottom **14**.

FIG. 3 depicts an exploded perspective view of the ballpoint dot pen tattoo cartridge **10** of FIG. 1.

FIG. 4 depicts embodiment of the ballpoint dot pen tattoo cartridge **10** of FIG. 1 used by a tattoo machine operator controlling the driving actuation of the tattoo machine **150** to the ballpoint pen ink discharge tip **42** and thus controls

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marking of the material **200** with the ballpoint pen element pen ink discharge tip and ink **250**.

FIG. **5A** depicts an elevational view of the cartridge barrel cap **60** for the embodiment of the ballpoint dot pen tattoo cartridge **10** of FIG. **1**.

FIG. **5B** depicts a planar top view of FIG. **5A**.

FIG. **6A** depicts an elevational view of the cartridge barrel ballpoint pen stabilizing element **70** for the embodiment of the ballpoint dot pen tattoo cartridge **10** of FIG. **1**.

FIG. **6B** depicts a planar top view of FIG. **6A**.

DETAILED DESCRIPTION

The present invention is directed to embodiments for a ballpoint dot pen tattoo cartridge **10**, as depicted in FIGS. **1-6B**.

An embodiment of the ballpoint dot pen tattoo cartridge **10** includes an integral cartridge barrel **12** having a longitudinal centerline axis **100**, FIG. **1**, a first cartridge barrel aperture **20** centered on and along the longitudinal centerline in a tapered bottom **14** of the cartridge barrel comprising a flanged top surface **22** at a top portion **24** of the first cartridge barrel aperture **20**, FIGS. **1-3**. A second barrel aperture **30** is centered on and along the longitudinal centerline axis **100** at a cylindrical top **16** of the cartridge barrel **12** and includes a diameter larger than the first barrel aperture **20** and a locking indent **34** on a second barrel aperture top surface **32**, FIG. **3**.

An embodiment of the ballpoint dot pen tattoo cartridge **10** includes a ballpoint pen element **40** comprising an ink reservoir and sized to be received within the first cartridge barrel aperture **20**, FIGS. **1-3**. The ballpoint pen element includes **40** an ink discharge tip **42**, an elongate shaft **44** comprising an ink reservoir **46** and two equal sized tabs **48** on opposite sides of the ballpoint pen element **40** are provided at an equal distance slightly below a ballpoint pen element elongate shaft **44** midpoint. The ballpoint pen element **40** further provides a pen ink discharge tip **42** having a ballpoint pen assembly **50** for ink discharge.

An embodiment of the ballpoint dot pen tattoo cartridge includes a cartridge barrel cap **60** sized to releasably fit into and be held by the second barrel aperture **30**. Cartridge casings **80** provided on opposite external sides of the second barrel aperture **30** are sized to be received into the tattoo machine **150** and held thereby attaching the cylindrical top **16** of the cartridge barrel **12** to a tattoo machine **150**, a. A central cap aperture **62** is sized to receive the ballpoint pen element **40**, and a locking detent **66** on a cap top circumference **64** sized to be received into the second barrel aperture top surface **32**, FIGS. **1-3**, **5A**, and **5B**.

An embodiment of the ballpoint dot pen tattoo cartridge includes a resilient assembly element **90** within the integral cartridge barrel **12**, sized to receive the ballpoint pen element **40** between the first barrel aperture flanged top surface **22** and the ballpoint pen two equal sized tabs **48** providing means for movement of the ballpoint pen element **40** within the cartridge barrel **12** and exit and retraction of the ballpoint pen assembly for ink discharge **50** from the first barrel cartridge barrel aperture **20** and the integral cartridge barrel tapered bottom **14**, FIGS. **1-3**.

An embodiment of the ballpoint dot pen tattoo cartridge includes a cartridge barrel ballpoint pen stabilizing element **70** sized to be within the integral cartridge barrel **12** between a bottom portion of the cartridge barrel cap **60** and above the two equal sized tabs **48** on opposite sides of the ballpoint pen

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element and providing a stabilizing element aperture **72** sized to receive the ballpoint pen element **40**, FIGS. **3**, **6A**, and **6B**.

The driving actuation of the tattoo machine **150** to the ballpoint pen element **40** causes the ballpoint pen element ink discharge tip **42** to reciprocate within the integral cartridge barrel **12** between one or more extended and retracted positions from the first barrel cartridge barrel aperture **20** and the integral cartridge barrel tapered bottom **14** allowing the ballpoint pen ink discharge tip **42** to dispose ink from the ballpoint ink reservoir onto a material **200**, FIGS. **1**, **2** and **4**. The tattoo machine operator controls the driving actuation of the tattoo machine **150** to the ballpoint pen ink discharge tip **42** and thus controls marking of the material **200** with the ballpoint pen element pen ink discharge tip and ink **250**, FIG. **4**.

Different features, variations and multiple different embodiments have been shown and described with various details. What has been described in this application in terms of specific embodiments is done for illustrative purposes only and without the intent to limit or suggest that what has been conceived is only one embodiment or specific embodiments. It is to be understood this disclosure is not limited to any single specific embodiments or enumerated variations. Many modifications, variations and other embodiments will come to mind of those skilled in the art, and which are covered by this disclosure. It is intended that the scope of this disclosure should be determined by a proper legal interpretation and construction of the disclosure, including equivalents, as understood by those of skill in the art relying upon the complete disclosure present at the time of filing.

I claim:

1. A ballpoint dot pen tattoo cartridge, comprising:

- A) an integral cartridge barrel comprising a longitudinal centerline axis, a first cartridge barrel aperture centered on and along the longitudinal centerline in a tapered bottom of the cartridge barrel comprising a flanged top surface at a top portion of the first cartridge barrel aperture, and a second cartridge barrel aperture centered on and along the longitudinal centerline at a cylindrical top of the cartridge barrel and comprising a diameter larger than the first cartridge barrel aperture and a locking indent on a top surface;
- B) a ballpoint pen element comprising an ink reservoir and sized to be received within the first cartridge barrel aperture and comprising two equal sized tabs on opposite sides of the ballpoint pen element at an equal distance below a ballpoint pen element midpoint and a pen tip comprising a ballpoint pen assembly for ink discharge;
- C) a cartridge barrel cap sized to releasably fit into and be held by the second cartridge barrel aperture, the cartridge barrel comprising external cartridge casings to attach the cylindrical top of the cartridge barrel to a tattoo machine, a central cap aperture sized to receive the ballpoint pen element, and a locking detent on a cap top circumference sized to be received into the second cartridge barrel aperture top surface;
- E) a resilient assembly element within the integral cartridge barrel, sized to receive the ballpoint pen element between the first cartridge barrel aperture flanged top surface and the ballpoint pen two equal sized tabs providing means for movement of the ballpoint pen element within the cartridge barrel and exit and retraction of the ballpoint, pen assembly for ink discharge from the first cartridge barrel aperture and the integral cartridge barrel tapered bottom;

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F) a cartridge barrel ballpoint pen stabilizing element sized to be within the integral cartridge barrel between a bottom portion of the cartridge barrel cap and above the two equal sized tabs on opposite sides of the ballpoint pen element, and comprising a stabilizing element aperture sized to receive the ballpoint pen element;

wherein a driving actuation of the tattoo machine to the ball point pen element causes the ballpoint pen element pen tip to reciprocate within the cartridge barrel between one or more extended and retracted positions from the first cartridge barrel aperture and the integral cartridge barrel tapered bottom allowing the ball point pen tip to dispose ink from the ballpoint ink reservoir onto a material; and wherein a tattoo machine operator controls the driving actuation of the tattoo machine to the ballpoint pen tip for controlling marking of the material with the ballpoint pen element pen tip and ink.

2. The ballpoint dot pen tattoo cartridge according to claim 1, wherein the resilient assembly element comprises a metal spring.

3. A ballpoint dot pen tattoo cartridge, comprising:

A) an integral cartridge barrel comprising a longitudinal centerline axis, a first cartridge barrel aperture centered on and along the longitudinal centerline in a tapered bottom of the cartridge barrel comprising a flanged top surface at a top portion of the first cartridge barrel aperture, and a second cartridge barrel aperture centered on and along the longitudinal centerline at a cylindrical top of the cartridge barrel and comprising a diameter larger than the first barrel aperture and, a locking indent on a top surface, and external second cartridge casings to attach the cylindrical top of the second cartridge barrel to a tattoo machine;

B) a ballpoint pen element sized to be received within the first cartridge barrel aperture and comprising two equal sized tabs on opposite sides of the ballpoint pen element at an equal distance below a ballpoint pen element midpoint and a pen tip comprising a ballpoint pen assembly for ink discharge;

C) a cartridge barrel cap sized to releasably fit into and be held by the second cartridge barrel aperture and comprising a central cap aperture sized to receive the ballpoint pen element and a locking detent on a cap top circumference sized to be received into the second cartridge barrel aperture top surface;

E) a resilient metal spring within the integral cartridge barrel, sized to receive the ballpoint pen element between the first cartridge barrel aperture flanged top surface and the ballpoint pen two equal sized tabs providing means for movement of the ballpoint pen element within the cartridge barrel and exit and retraction of the ballpoint pen assembly for ink discharge from the first cartridge barrel aperture and the integral cartridge barrel tapered bottom;

F) a cartridge barrel ballpoint pen stabilizing element sized to be within the integral cartridge barrel between a bottom portion of the cartridge barrel cap and above the two equal sized tabs on opposite sides of the ballpoint pen element, and comprising a stabilizing element aperture sized to receive the ballpoint pen element;

wherein a driving actuation of the tattoo machine to the ball point pen element causes a ballpoint pen element pen tip to

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reciprocate within the cartridge barrel between one or more extended and retracted positions from the first cartridge barrel aperture and the integral cartridge barrel tapered bottom allowing the ball point pen tip to dispose ink from a ballpoint ink reservoir onto a material; and

wherein a tattoo machine operator controls the driving actuation of the tattoo machine to the ballpoint pen tip for controlling marking of the material with the ballpoint pen element pen tip and ink.

4. A ballpoint dot pen tattoo cartridge, comprising:

A) an integral cartridge barrel comprising a longitudinal centerline axis;

B) a ballpoint pen element movably disposed within an inner channel of the barrel, the ballpoint pen element comprising an ink discharge tip, an elongate shaft comprising an ink reservoir, and two equal sized tabs on opposite sides of the elongate shaft at an equal distance below a midpoint of the ballpoint pen element;

C) a first cartridge barrel aperture centered on and along the longitudinal centerline in a tapered bottom of the cartridge barrel, sized to receive the ballpoint pen element elongate shaft and comprising a flanged top surface at a top portion of the first barrel aperture;

D) a cartridge barrel cap sized to releasably fit into and be held by a second cartridge barrel aperture centered on and along the longitudinal centerline at a cylindrical top of the cartridge barrel and comprising a diameter larger than the first barrel aperture, and an assembly means cartridge barrel external casings to attach the cylindrical top of the cartridge barrel to a tattoo machine;

E) a resilient assembly element within the cartridge barrel comprising a bottom resilient surface contacting the first cartridge barrel aperture flanged surface and a top resilient surface contacting the ballpoint pen elongate shaft two equal sized tabs, and sized to receive the ballpoint pen element elongate shaft between the first cartridge barrel aperture flanged top surface and the ballpoint pen elongate shaft two equal sized tabs providing for movement of the ballpoint pen element within the integral cartridge barrel and exit and retraction of the ballpoint pen element ink discharge tip from the integral cartridge barrel tapered bottom;

F) a cartridge barrel ballpoint pen stabilizing element sized to be within the integral cartridge barrel between a bottom portion of the cartridge barrel cap and above the two equal sized tabs on opposite sides of the ballpoint pen elongate shaft, and comprising a stabilizing element central aperture sized to receive the ballpoint pen elongate shaft;

wherein a driving actuation of the tattoo machine to the ball point pen element causes the ball point pen element to reciprocate within the barrel between one or more extended and retracted positions from the integral cartridge barrel tapered bottom allowing the ball point pen tip to dispose ink from the ink reservoir onto a material; and

wherein a tattoo machine operator controls the driving actuation of the tattoo machine to the ball point pen tip for controlling marking of the material with the tip and ink.

5. The ballpoint dot pen tattoo cartridge according to claim 4, wherein the resilient assembly element comprises a metal spring.