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(54) **Title**: CIRCUMCISION INSTRUMENT

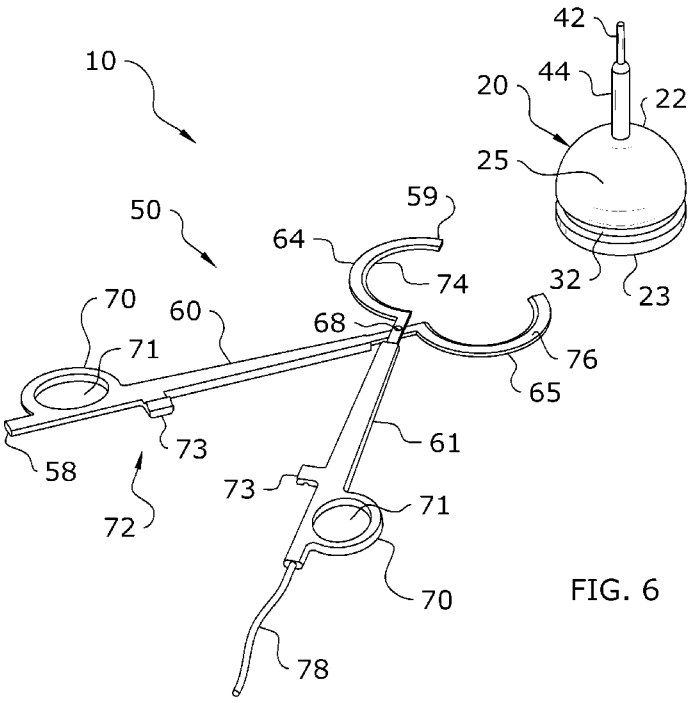

FIG. 6

(57) **Abstract**: A circumcision instrument used to perform a circumcision procedure. The circumcision instrument generally includes a housing having a chamber configured to receive a glans penis and an outer surface configured to be enveloped by a prepuce. An annular groove is disposed in the outer surface. A conductive ring is located at the bottom of the annular groove. A clamp has a pair of jaws that are moveable from an open position to a closed position surrounding the prepuce. In the closed position the jaws are disposed at least partially within the annular groove. A conductive inner cutting edge is located on the jaws. The clamp and the housing are connectable to a source of diathermy energy such that diathermy energy can flow between the inner cutting edge and the conductive ring, thereby cutting the prepuce.

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Circumcision Instrument

CROSS REFERENCE TO RELATED APPLICATIONS

Not applicable to this application.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable to this application.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to surgical instruments and more specifically it relates to a circumcision instrument for performing a circumcision procedure.

Description of the Related Art

Any discussion of the related art throughout the specification should in no way be considered as an admission that such related art is widely known or forms part of common general knowledge in the field.

Male circumcision is one of the most commonly performed operations worldwide. Approximately 30% of men globally and 35% of men in developing countries are circumcised for religious, cultural, medical and other reasons, such as hygiene, aesthetics and peer pressure. Circumcision prevents not only urinary tract infections in infants, but also sexually transmitted diseases and cervical and penile cancer in adults. The World Health Organization, the Joint United Nations Program on HIV/AIDS and the US

President's Emergency Plan for AIDS Relief have identified male circumcision as an effective means of HIV prevention in regions with high rates of heterosexual transmission. Male circumcision has been performed using many different techniques; at different age groups; with or without anesthesia; by medical and non-medical personnel. Each technique has its advantages and disadvantages. If circumcision is to be performed in the outpatient clinic under local anesthesia, the technique used should be safe and fast. Numerous techniques for male circumcision have been used, such as conventional circumcision, the Shenghuan Disposable Minimally Invasive Circumcision Anastomosis device, the plastic clamp technique and the Plastibell device.

Regardless of which method is selected, there are complications. The most common complication is bleeding. The Plastibell device is the most frequently used circumcision device in the world. It has to be worn for several days. There are also other complications of the Plastibell device, including the delayed separation of the ring, bleeding, localized superficial infection and proximal migration of the ring. If the Plastibell device does not release, complications can result such as penile edema and penile ischemia. In addition, some unusual complications may occur such as ischemic glans penis, urine retention and grievous penile injury as well as parental/care giver anxiety until the device falls off.

Because of the inherent problems with the related art, there is a need for an improved circumcision instrument for use in performing circumcision procedures.

BRIEF SUMMARY OF THE INVENTION

The invention generally relates to a circumcision instrument for performing a circumcision procedure. The circumcision instrument includes a housing having a chamber configured to receive a glans penis and an outer surface configured to be enveloped by a prepuce. An annular groove is disposed in the outer surface. A conductive ring is located at the bottom of the annular groove. A clamp has a pair of jaws that are moveable from an open position to a closed position surrounding the prepuce. In the closed position, the jaws are disposed at least partially within the annular groove. A conductive inner cutting edge is located on the jaws. The clamp and the housing are connectable to a source of diathermy energy such that diathermy energy can flow between the inner cutting edge and the conductive ring, thereby cutting the prepuce.

There has thus been outlined, rather broadly, some of the features of the invention in order that the detailed description thereof may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and that will form the subject matter of the claims appended hereto. In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction or to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of the description and should not be regarded as limiting.

BRIEF DESCRIPTION OF THE DRAWINGS

Various other objects, features and attendant advantages of the present invention will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

FIG. 1 is an overall upper front perspective view of a circumcision housing of the present invention.

FIG. 2 is a side view of the circumcision housing.

FIG. 3 is a top view of the circumcision housing.

FIG. 4 is a bottom view of the circumcision housing.

FIG. 5 is a top view of a circumcision clamp of the present invention in an open position.

FIG. 6 is an overall upper front perspective view illustrating both the circumcision housing and the circumcision clamp in an open positon.

FIG. 7 is an overall upper front perspective view illustrating the circumcision housing with the circumcision clamp attached in a closed position.

FIG. 8 is a top view of the circumcision clamp in a closed position.

FIG. 9 is a side cross-sectional view of the circumcision housing taken along section line 9-9 of FIG. 2 and a side cross-sectional view of the circumcision clamp in the open position.

FIG. 10a is a side cross-sectional view of the circumcision housing after receving a glans penis with the prepuce extending over the housing and the circumcision clamp in the open position.

FIG. 10b is a side cross-sectional view of the circumcision housing after receving a glans penis with the circumcision clamp in the closed position illustrating resection of the prepuce.

DETAILED DESCRIPTION OF THE INVENTION

A. Overview.

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. 1 through 10b illustrate a circumcision instrument **10** for performing a circumcision procedure. The circumcision instrument **10** comprises a circumcision housing **20** having a chamber **30** configured to receive a glans penis **102** and an outer surface **25** configured to be enveloped by a foreskin or prepuce **104**. An annular groove **32** is disposed in the outer surface **25**. A conductive ring **40** is located at the bottom **31** of the annular groove **32**. A clamp **50** has a pair of jaws **64**, **65** that are moveable from an open position **54** to a closed position **56** surrounding the prepuce **104**. In the closed position, the jaws **64**, **65** are disposed at least partially within the annular groove **32**. In one embodiment, the jaws **64**, **65** are located entirely within the annular groove **32**. A conductive inner cutting edge **74** is located on the jaws **64**, **65**. The clamp **50** and the housing **20** are connectable to a diathermy machine **90** that supplies diathermy energy. The diathermy energy flows between the inner cutting edge **74** and the conductive ring **40**, thereby cutting the prepuce **104**.

B. Circumcision Housing.

FIGS. 1 through 4 illustrate the circumcision housing **20**. The circumcision housing **20** is generally hemi-spherical in shape. The circumcision housing **20** has a main body **21**, a top **22**, a bottom **23**, an outer peripheral wall **24**, an outer surface **25**, and an inner surface **26**. An opening **28** is located at the bottom **23** and opens into a hemi-spherical internal chamber **30** formed within housing **20**. An annular groove **32** has angled walls **33** that extend inwardly into outer wall **24**. The annular groove **32** has a bottom **31** at the end of angled walls **33**.

With additional reference to FIG. 9, the circumcision housing **20** further includes a hemi-spherical shaped conductive cone **34** disposed within the housing **20**. The conductive cone **34** can be formed from an electrically conductive material such as a metal.

The conductive cone **34** has a bottom portion **35**, top portion **36** and a connecting member **37** that is attached to top portion **36**. An insulating cover **38** is disposed over the outer and inner surfaces of cone **34**. The insulating cover **38** is formed from an electrically non-conductive material such as but not limited to rubber or plastic. The insulating cover **38** forms the outer **25** and inner **26** surfaces of the housing **20**. The insulating cover **38** is absent from the bottom **31** of the annular groove **32** such that an annular conductive ring **40** of the conductive cone **34** is exposed around the entire circumference of the housing **20**. The insulating cover **38** is also absent from the distal end of the connecting member **37** such that a terminal **42** is exposed. Where the insulating cover **38** covers the proximal portion of connecting member **37**, a handle **44** is formed. The handle **44** allows a surgical practitioner to manipulate and position the circumcision housing **20**.

C. Circumcision Clamp.

Referring to FIGS. 5 through 8, the circumcision instrument **10** further comprises a circumcision clamp **50**. The circumcision clamp **50** has a scissors mechanism **52** that allows the circumcision clamp **50** to be moved between an open position **54** and a closed position **56**. The circumcision clamp **50** can be formed from a suitable material such as stainless steel. The circumcision clamp **50** includes a proximal end **58**, a distal end **59**, arms **60**, **61** and jaws **64**, **65**. A pivot pin **68** rotatably connects the arms **60, 61** for pivoting movement of each arm about pivot pin **68**. Finger loops **70** and finger holes **71** are integrally formed with arms **60, 61** toward the proximal end **58**. Finger loops **70** and holes **71** allow a surgical practitioner to grasp and manipulate the clamp **50**. A locking mechanism **72** is attached to opposed portions of the arms **60, 61**. The locking mechanism **72** has interlocking clips **73** that engage each other in the closed position **56** to retain the clamp **50** in the closed position **56**.

The circumcision clamp **50** further includes a jaw **64** that is connected to the distal end of an arm **61** and a jaw **65** that is connected to the distal end of an arm **60**. The jaws **64, 65** are semi-circular in shape and can be moved toward and away from each other by the complementary movement of the arms **60, 61** toward and away from each other by a

user. The inner most surface of the jaws **64, 65** are formed with a conductive inner cutting edge **74**. The remainder of the jaws **64, 65** and the rest of circumcision clamp **50** can be covered with an insulating coating **76**. The insulating coating **76** is electrically insulating and non-conductive. An electrically conductive wire **78** is attached to the proximal end **58** of one of the arms **61**. The wire **78** is electrically connected to the clamp **50**.

D. Diathermy Machine.

Referring to FIG. 7, the circumcision instrument **10** is shown connected to a diathermy machine **90**. The diathermy machine **90** is a source of diathermy energy to the circumcision instrument **10**. Diathermy means dielectric heating produced by rotation of molecular dipoles in a high frequency alternating electric field. This effect is most widely used in microwave ovens. The diathermy machine **90** generates electromagnetic waves that can vary in wavelength from microwaves to radio frequency waves. The diathermy machine **90** is used in electro-surgery. Electro-surgery refers broadly to a class of medical procedures that rely on the application of high frequency electrical energy to patient tissue to achieve a number of possible effects, such as cutting, coagulation, hyperthermia and necrosis. Electro-surgical devices rely on contacting electrodes of different polarity in close proximity to each other against a human tissue.

The diathermy machine **90** is electrically connected to the housing **20** by a wire **92** and a connector **93** connected to a terminal **42**. The diathermy machine **90** is electrically connected to the clamp **50** by a wire **94** and a connector **95** that is connected to a wire **78**. The diathermy machine **90** includes a display **96** that provides information relating to the operation of the diathermy machine **90** such as the output frequency and duration of the energy pulse. The diathermy machine **90** further includes input control devices **98** such as buttons and knobs that allow the user to control the operational settings of the diathermy machine **90** such as the output frequency and duration of the energy pulse.

E. Method of Operation.

Referring to FIG. 7, a surgical practitioner begins a circumcision procedure by connecting the connector **93** to the terminal **42** of the housing **20** and connecting the connector **95** to the wire **78** that is attached to clamp **50**, thereby connecting the diathermy machine **90** to the circumcision instrument **10**. Turning to FIG. 9, initially the circumcision housing **20** is empty and the clamp **50** is in an open position **54**. It is noted that circumcision housing **20** and clamp **50** can be manufactured in a range of appropriate sizes and that the surgical practitioner can select the appropriate sizes of circumcision housing **20** and clamp **50** to be used. With reference to FIG. 10a, the surgical practitioner grasps the handle **44** and positions the housing **20** over the glans penis **102** located at the end of the penis **100**. In this position, the glans penis **102** is located within the chamber **30** and surrounded by the inner surface **26**. The foreskin or prepuce **104** is positioned by the surgical practitioner over the outer surface **25** such that the housing **20** is enveloped by the prepuce **104** as shown in FIG. 10a. The prepuce **104** has an end portion **106**. A portion of the prepuce inner surface **108** is in contact with the outer surface **25**. The housing **20** is therefore located between the glans penis **102** and the prepuce **104**.

Next, the surgical practitioner positions the clamp **50** around the housing **20**. With the jaws **64, 65** in the open position **54**, the jaws **64, 65** are moved to a position juxtaposed to the annular groove **32**. The surgical practitioner, while grasping the finger loops **70**, squeezes the arms **60, 61** towards each other causing the jaws **64, 65** to move toward the prepuce **104**. Further squeezing of the arms **60, 61**, by the surgical practitioner, causes the inner cutting edges **74** to come into contact with the prepuce **104** and to bend a portion of the prepuce **104** into the annular groove **32** and into contact with the conductive ring **40**. In this position, the jaws **64, 65** are disposed at least partially within the annular groove **32** of the housing **20**. In one embodiment, the jaws **64**, **65** are located entirely within the annular groove **32**. Additional squeezing of the arms **60, 61**, by the surgical practitioner, causes opposed clips **73** (FIG. 5) of the locking mechanism **72** to engage thereby locking the jaws **64, 65** in the annular groove **32** and surrounding the contact ring **40**. This is the closed position **56** as shown in FIG. 10b.

The next step in the circumcision procedure is for the surgical practitioner to trigger the diathermy machine **90** to supply diathermy energy that flows between the inner cutting edges **74** and the conductive ring **40**, thereby cutting the prepuce **104**. The high frequency electrical current flows from the inner cutting edge **74** of each jaw through the foreskin tissue **104** and into conductive ring **40**. By energizing the inner cutting edges **74** and conductive ring **40** at opposite polarities using the diathermy machine **90**, the foreskin **104** located between the inner cutting edges **74** and the ring **40**, will be coagulated and excised or resected. During the circumcision procedure, skin adjacent to the prepuce **104** is protected from excess heat by the insulating coating **76** on the outer surface of the jaws **64, 65** and the remainder of the clamp **50**. The insulating coating **76** also prevents heating of the clamp **50** in order to be safe for the surgical practitioner to handle.

After the prepuce **104** has been separated, the surgical practitioner unlocks the clamp **50** by moving the clips **73** away from each other along an axis perpendicular to the axis of the arms **60, 61**. The surgical practitioner moves the clamp **50** from the closed position **56** to the open position **54** and removes the housing **20** from the glans penis **102**.

The use of the circumcision instrument **10** has several advantages. First, the housing **20** and the clamp **50** are readily positioned by a surgical practitioner resulting in a fast circumcision procedure. Second, the use of diathermy energy results in cutting the foreskin **104** in a precise pure regular circular incision without bleeding. Third, the use of the housing **20** and the clamp **50** limits the effect of the diathermy energy to the tissue held between the housing **20** and the clamp **50** and fourth, the glans penis **102** is protected from electrical and thermal injuries by the insulating cover **38**.

Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar to or equivalent to those described herein can be used in the practice or testing of the present invention, suitable

methods and materials are described above. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety to the extent allowed by applicable law and regulations. The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive. Any headings utilized within the description are for convenience only and have no legal or limiting effect.

Index of Elements for Circumcision Instrument

- **10. Circumcision Instrument**
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.

- **20. Housing**
- 21. Body
- 22. Top
- 23. Bottom
- 24. Outer Wall
- 25. Outer Surface
- 26. Inner Surface
- 27.
- 28. Opening
- 29.

- **30. Chamber**
- 31. Bottom of groove
- 32. Groove
- 33. Angle Walls
- 34. Cone
- 35. Bottom
- 36. Top
- 37. Connecting Member
- 38. Cover
- 39.

- **40. Conductive Ring**
- 41.
- 42. Terminal
- 43.
- 44. Handle
- 45.
- 46.
- 47.
- 48.
- 49.

- **50. Clamp**
- 51.
- 52. Scissors Mechanism
- 53.
- 54. Open Position
- 55.
- 56. Closed Position
- 57.
- 58. Proximal End
- 59. Distal End

- **60. Arm**
- 61. Arm
- 62.
- 63.
- 64. Jaw
- 65. Jaw
- 66.
- 67.
- 68. Pivot Pin
- 69.

- **70. Finger Loop**
- 71. Finger Hole
- 72. Locking Mechanism
- 73. Clip
- 74. Inner cutting edge
- 75.
- 76. Coating
- 77.
- 78. Wire
- 79.

- **110.**
- 111.
- 112.
- 113.
- 114.
- 115.
- 116.
- 117.
- 118.
- 119.

Index of Elements for Circumcision Instrument

80.		**130.**	
81.		131.	
82.		132.	
83.		133.	
84.		134.	
85.		135.	
86.		136.	
87.		137.	
88.		138.	
89.		139.	
90. Diathermy Machine		**140.**	
91.		141.	
92.		142.	
93.		143.	
94.		144.	
95.		145.	
96.		146.	
97.		147.	
98.		148.	
99.		149.	
100.	**Penis**	**150.**	
101.		151.	
102.	Glans Penis	152.	
103.		153.	
104.	Prepuce	154.	
105.		155.	
106.	End	156.	
107.		157.	
108.	Inner Surface	158.	
109.	Outer Surface	159.	
120.		**160.**	
121.		161.	
122.		162.	
123.		163.	
124.		164.	
125.		165.	
126.		166.	
127.		167.	
128.		168.	
129.		169.	

CLAIMS

The invention claimed is:

1. A circumcision instrument comprising:

a housing having a chamber and an outer surface;

an annular groove disposed in the outer surface;

the chamber configured to receive a glans penis and the outer surface configured to be enveloped by a prepuce; and

a clamp having a pair of jaws wherein, the jaws are moveable from an open position to a closed position surrounding the prepuce and wherein in the closed position the jaws are disposed at least partially within the annular groove.

2. The circumcision instrument of claim 1, further comprising:

a conductive ring located at the bottom of the annular groove.

3. The circumcision instrument of claim 2, wherein the jaws have an inner cutting edge located thereon.

4. The circumcision instrument of claim 3, wherein the inner cutting edge is conductive.

5. The circumcision instrument of claim 4, wherein the clamp and the housing are connectable to a source of diathermy energy such that diathermy energy can flow between the inner cutting edge and the conductive ring, thereby cutting the prepuce.

6. The circumcision instrument of claim 1, wherein the housing further comprises:

a handle connected to the housing and extending away from the housing;

a conductive cone disposed within the housing; and

an insulating cover disposed over the housing, except in the annular groove such that the conductive ring is exposed.

7. The circumcision instrument of claim 6, wherein a conductive member extends through the handle and is connected to the conductive cone.

8. The circumcision instrument of claim 1, wherein the clamp further comprises:
a pair of opposed arms moveably coupled to a pivot pin; and
the jaws coupled to the one end of the arms such that pivoting movement of the arms about the pivot pins causes the jaws to move between the open and closed positions.

9. The circumcision instrument of claim 1, wherein the clamp is formed from a conductive material and is at least partially covered by an insulating coating.

10. The circumcision instrument of claim 3, wherein a wire is connected to one end of the clamp, the wire being electrically connected to the inner cutting edge through the clamp.

11. The circumcision instrument of claim 1, wherein a locking mechanism is mounted to the clamp, the locking mechanism configured to hold the clamp in the closed position.

12. An instrument for performing a circumcision procedure comprising:
a housing having a chamber configured to receive a glans penis and an outer surface configured to be enveloped by a prepuce;
an annular groove disposed in the outer surface;
a conductive ring located at the bottom of the annular groove;

a clamp having a pair of jaws wherein, the jaws are moveable from an open position to a closed position surrounding the prepuce and wherein in the closed position the jaws are disposed at least partially within the annular groove; and

a conductive inner cutting edge located on the jaws.

13. The instrument of claim 12, wherein the clamp and the housing are connectable to a source of diathermy energy such that diathermy energy can flow between the inner cutting edge and the conductive ring, thereby cutting the prepuce.

14. The instrument of claim 12, wherein the housing further comprises:

a handle connected to the housing and extending away from the housing;

a conductive cone disposed within the housing; and

an insulating cover disposed over the housing, except in the annular groove such that the conductive ring is exposed.

15. The instrument of claim 12, wherein the clamp further comprises:

a pair of opposed arms moveably coupled to a pivot pin; and

the jaws coupled to the one end of the arms such that pivoting movement of the arms about the pivot pins causes the jaws to move between the open and closed positions.

16. The circumcision instrument of claim 12, wherein a locking mechanism is mounted to the clamp, the locking mechanism configured to hold the clamp in the closed position.

17. A method of performing a circumcision procedure comprising:

positioning a housing having a chamber and an outer surface over a glans penis such that the chamber receives the glans penis and the outer surface is enveloped by a prepuce; and

positioning a clamp having a pair of jaws from an open position away from the housing to a closed position surrounding the prepuce and wherein in the closed position the jaws are disposed at least partially within an annular groove disposed in the outer surface of the housing.

18. The method of claim 17, further comprising:

connecting the housing and the clamp to a source of diathermy energy, the housing having a conductive ring located at the bottom of the annular groove and the jaws having a conductive inner cutting edge located thereon; and

triggering the diathermy energy to flow between the inner cutting edge and the conductive ring, thereby cutting the prepuce.

19. The method of claim 17, further comprising:

locking the clamp in the closed position using a locking mechanism.

20. The method of claim 19, further comprising:

unlocking the clamp;

moving the clamp from the closed position to the open position; and

removing the housing.

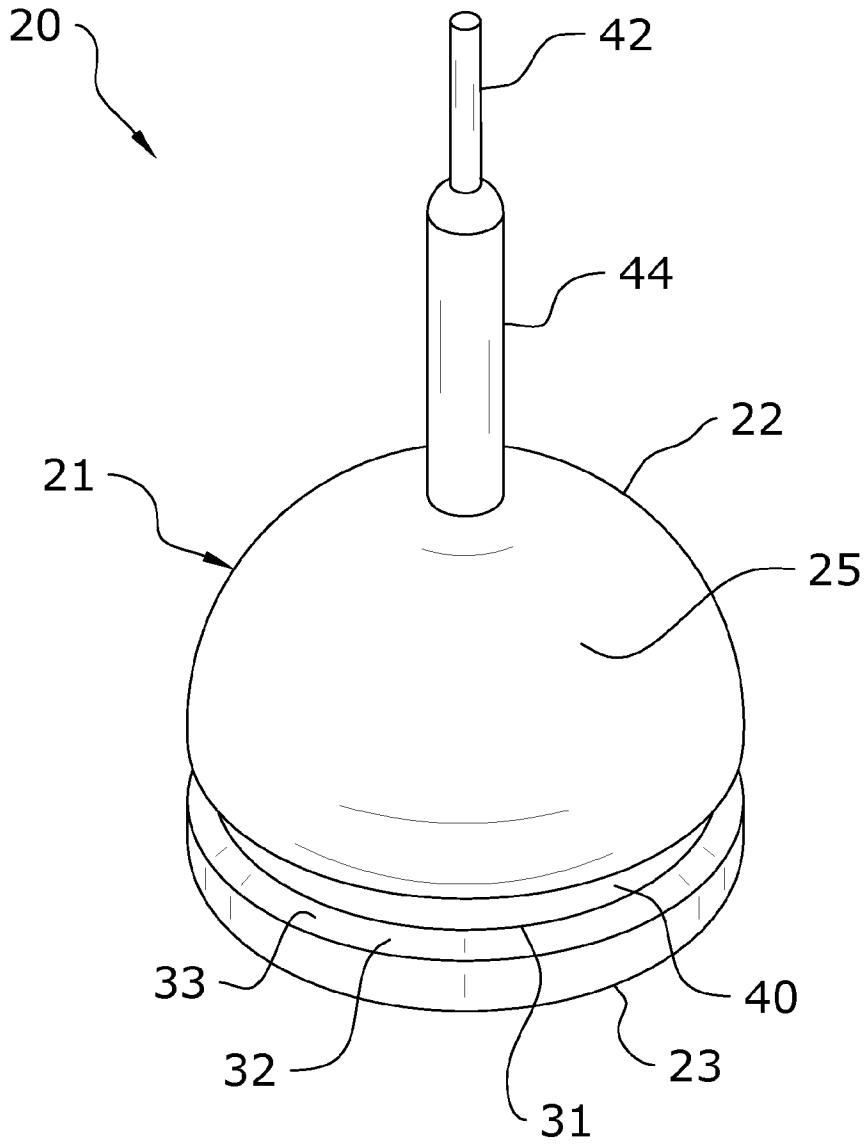

FIG. 1

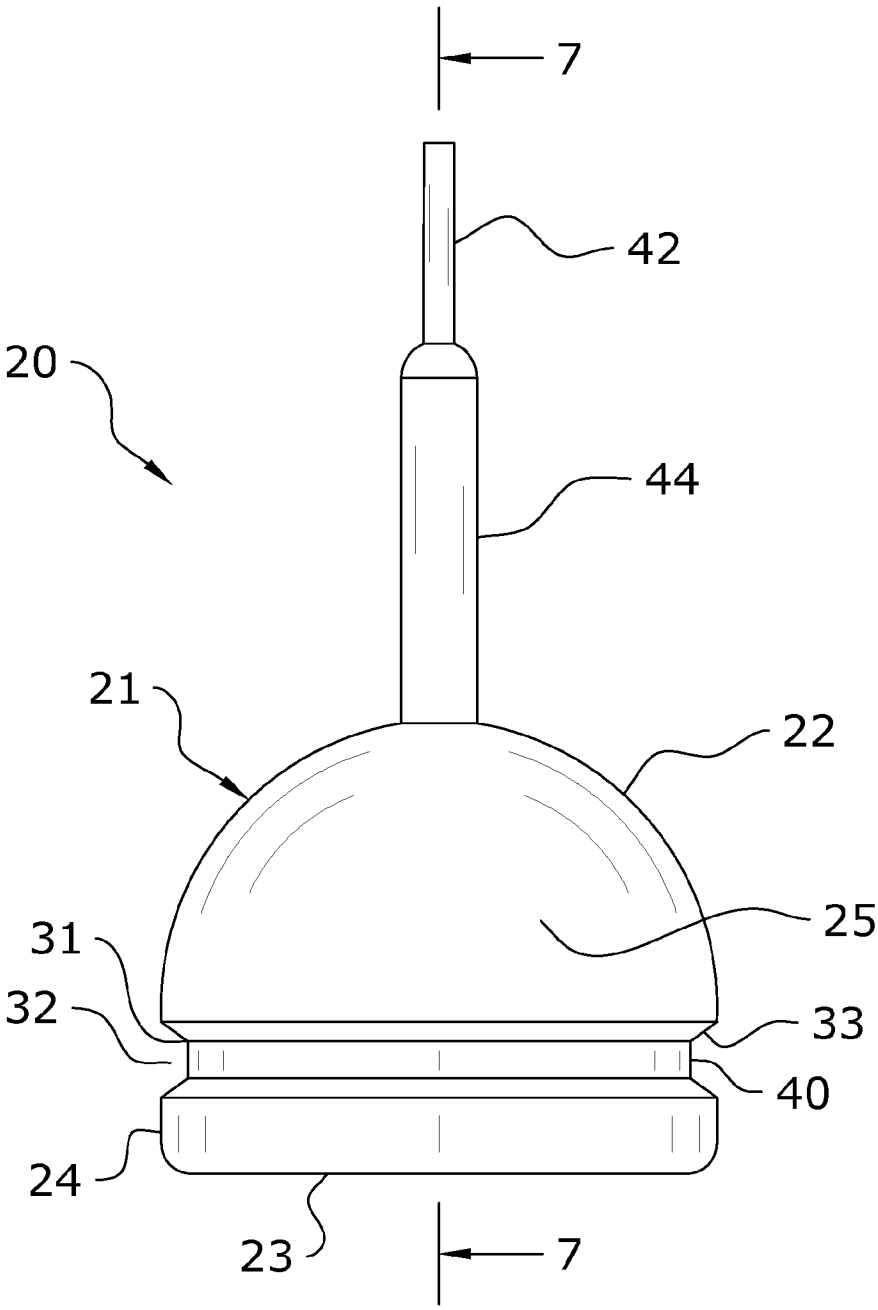

FIG. 2

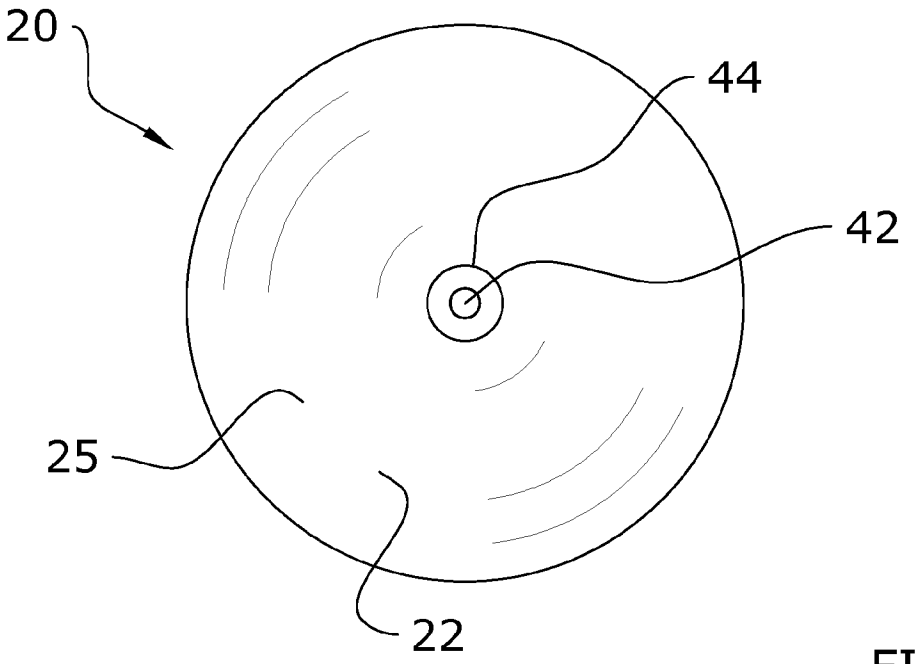

FIG. 3

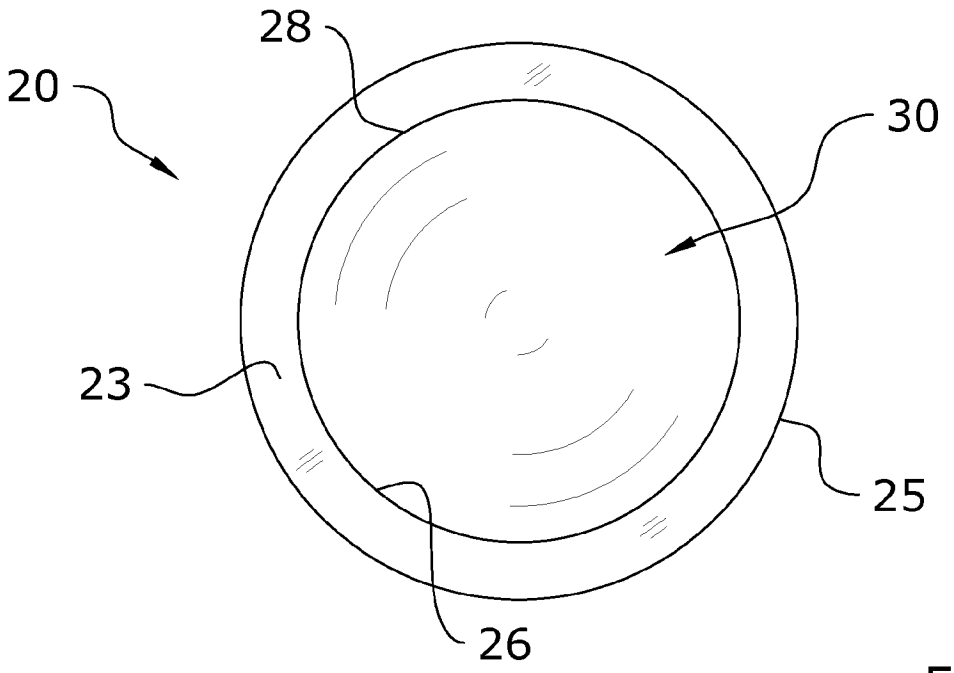

FIG. 4

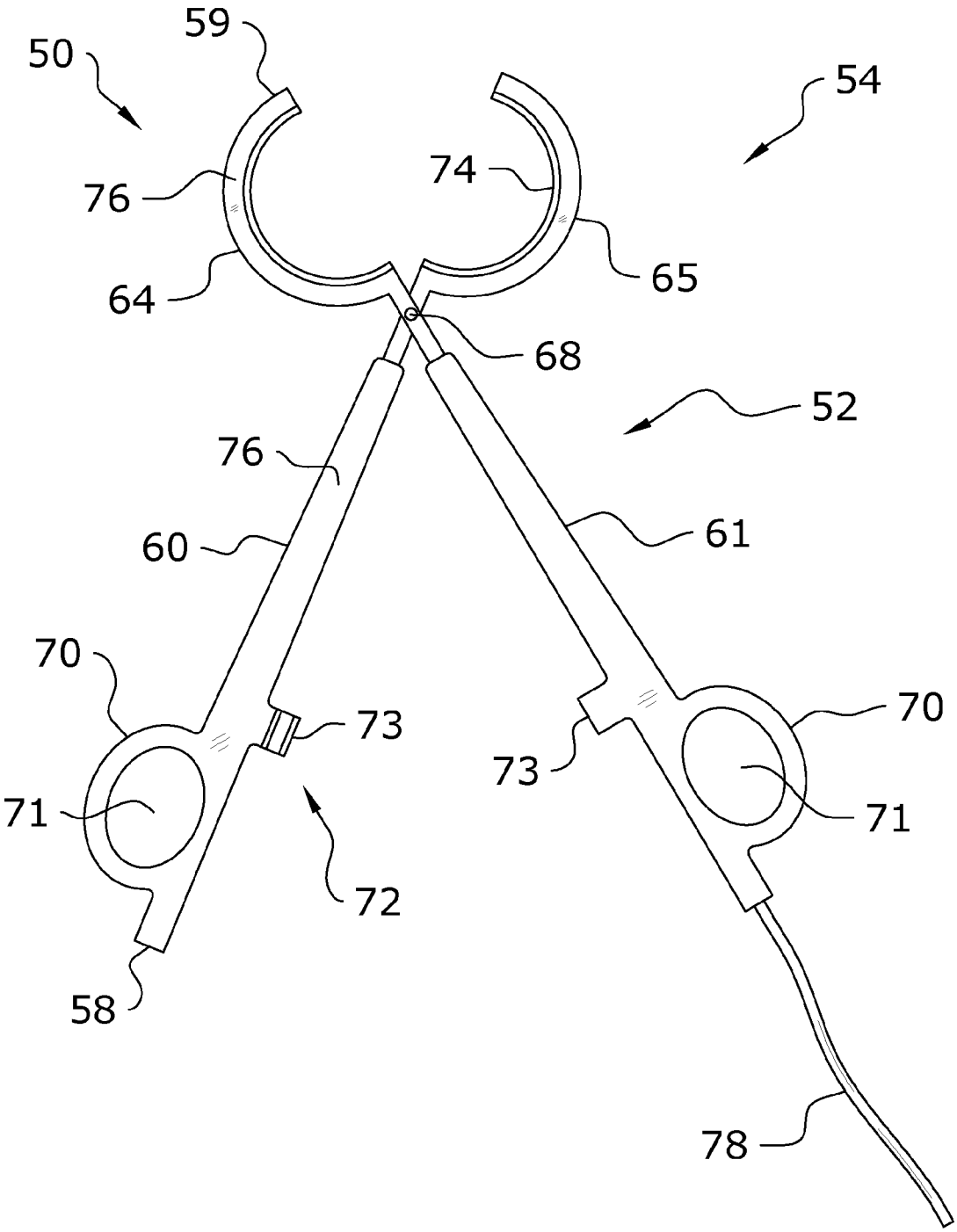

FIG. 5

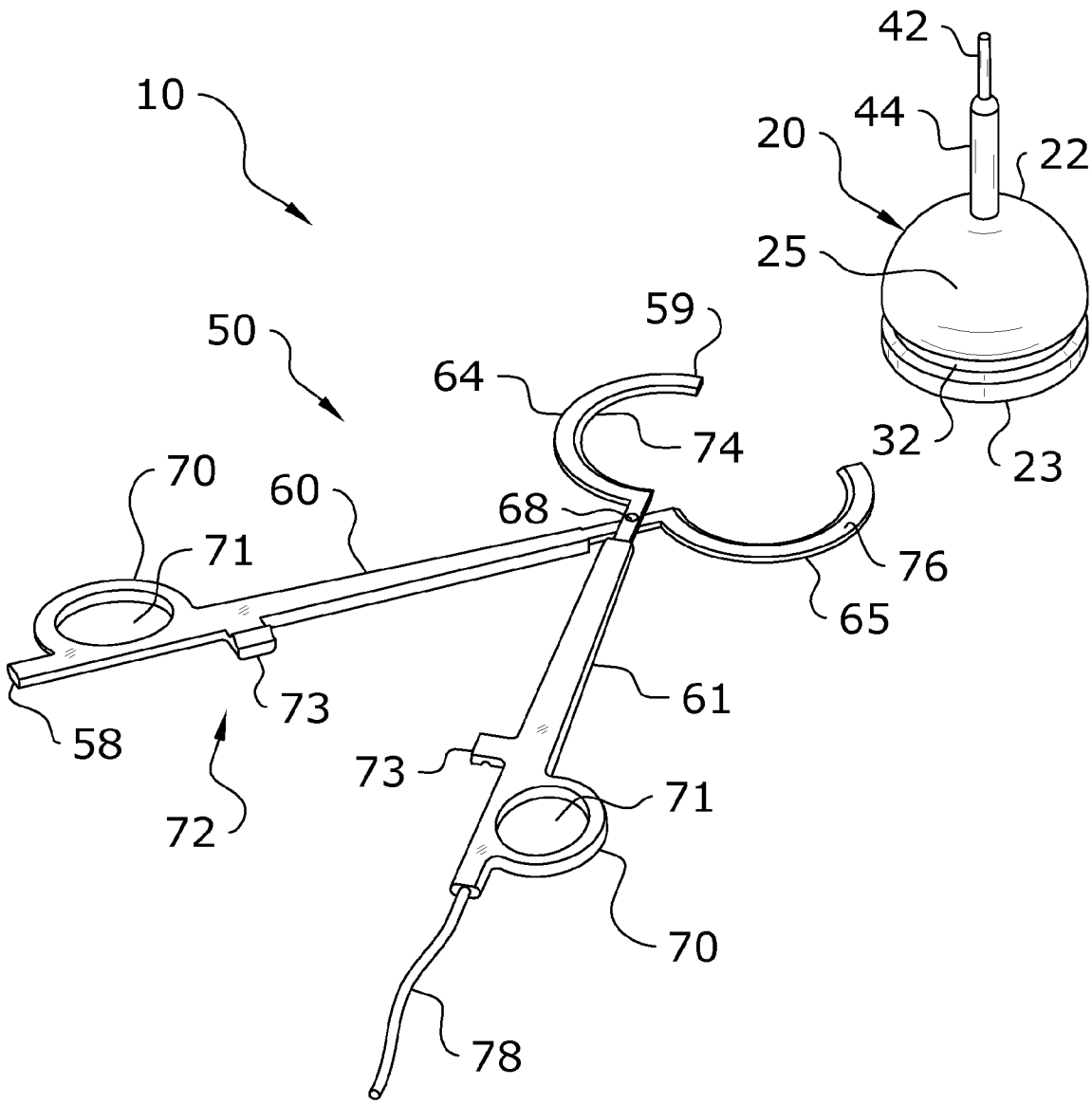
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FIG. 6

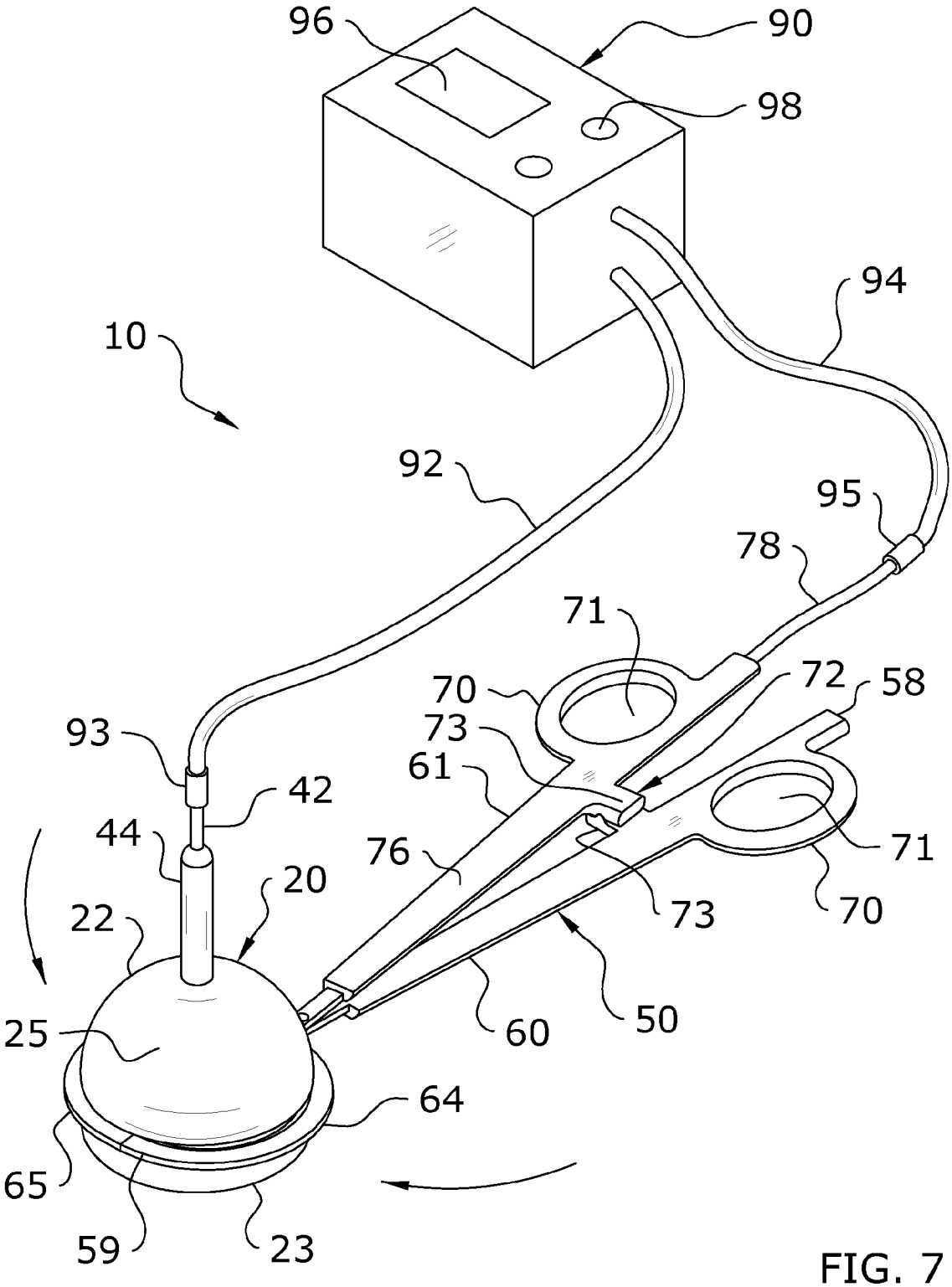
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FIG. 7

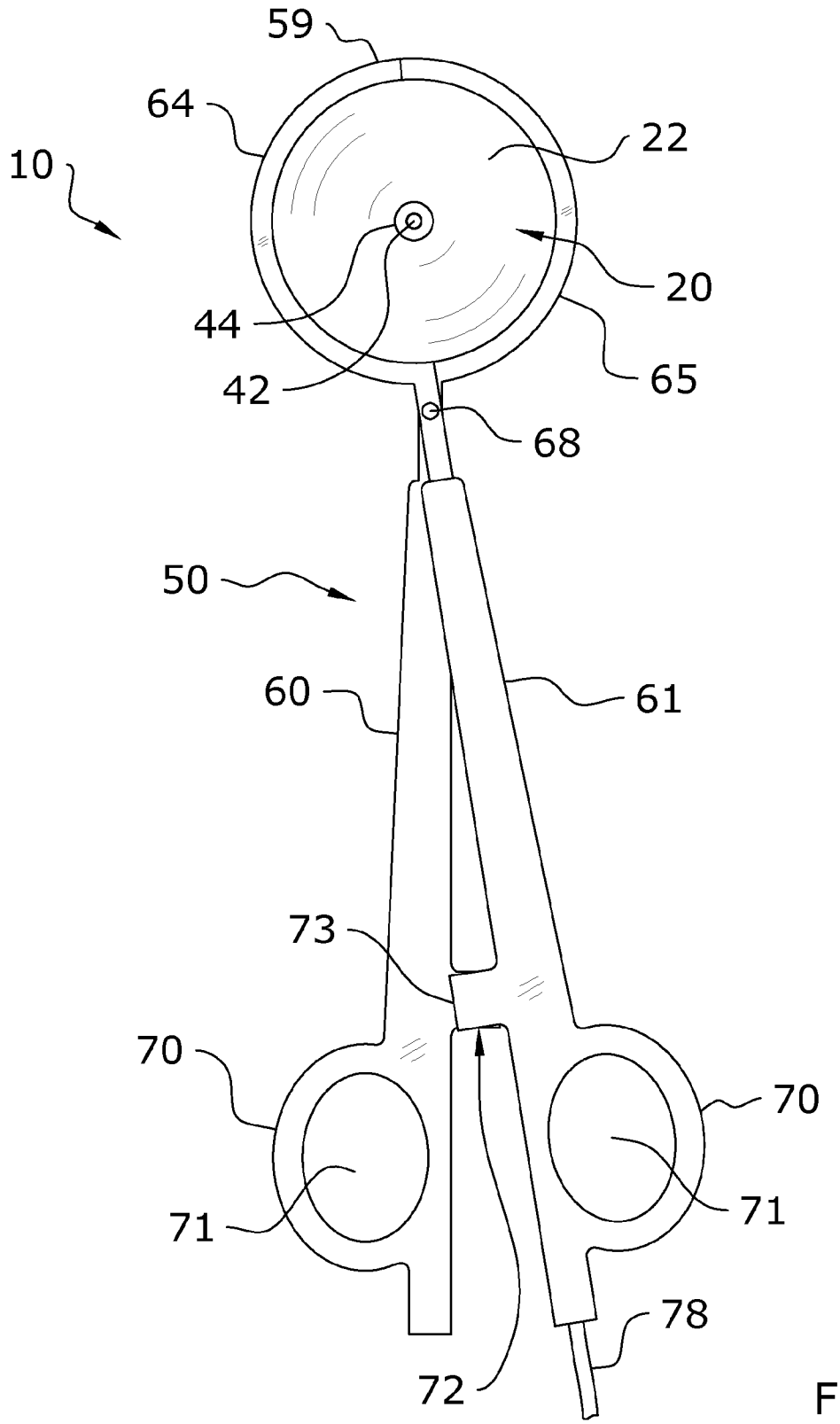

FIG. 8

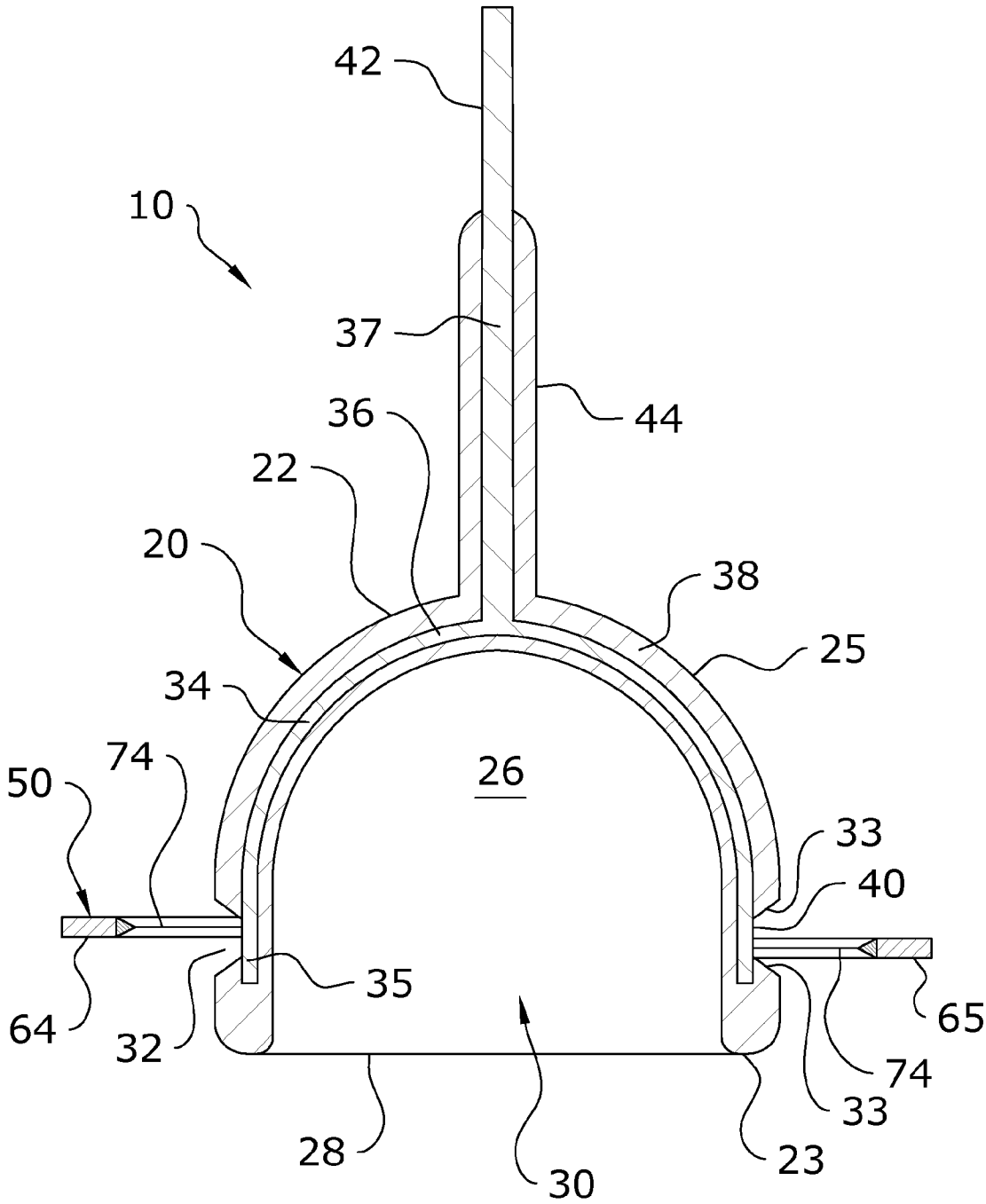

FIG. 9

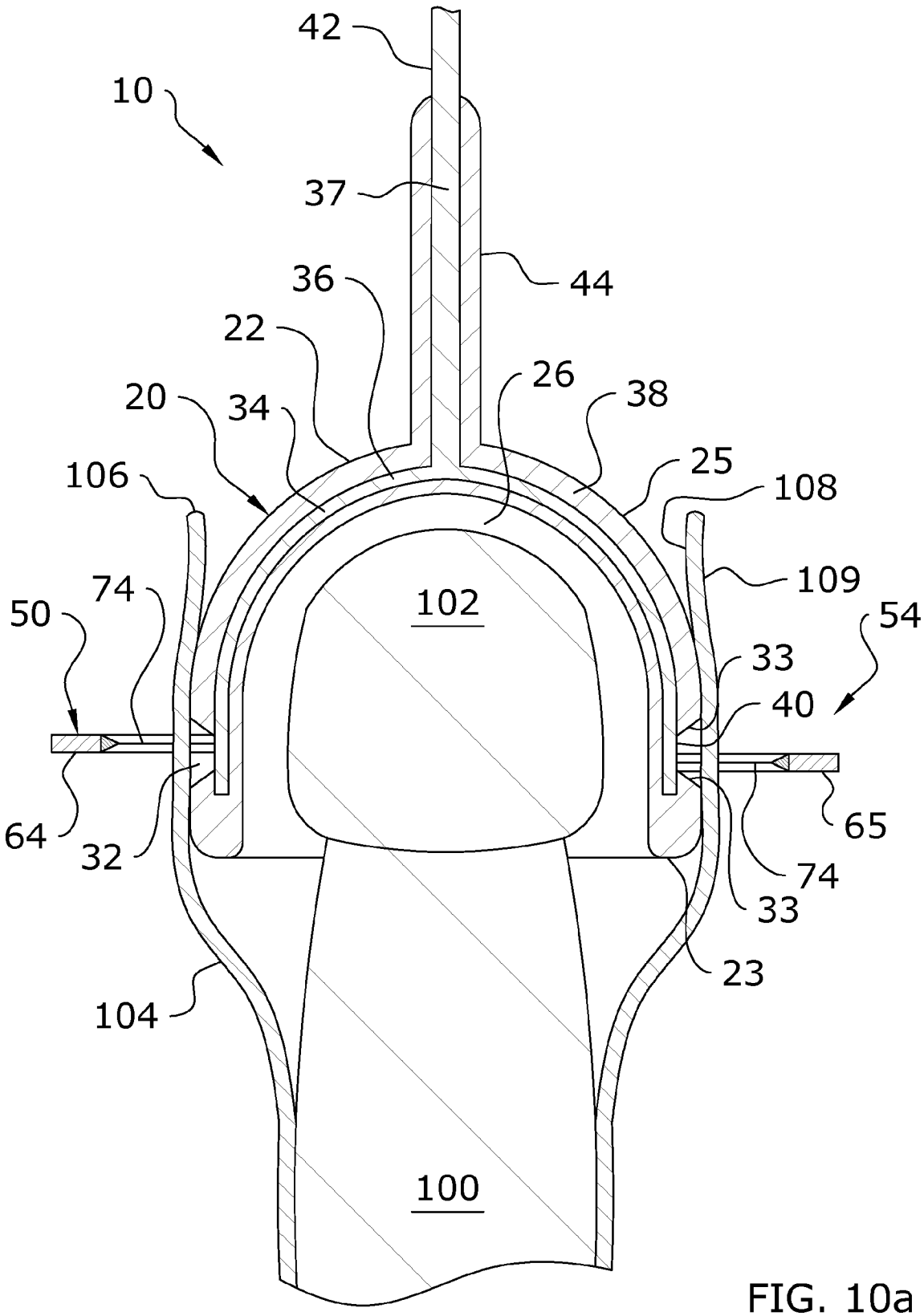
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FIG. 10a

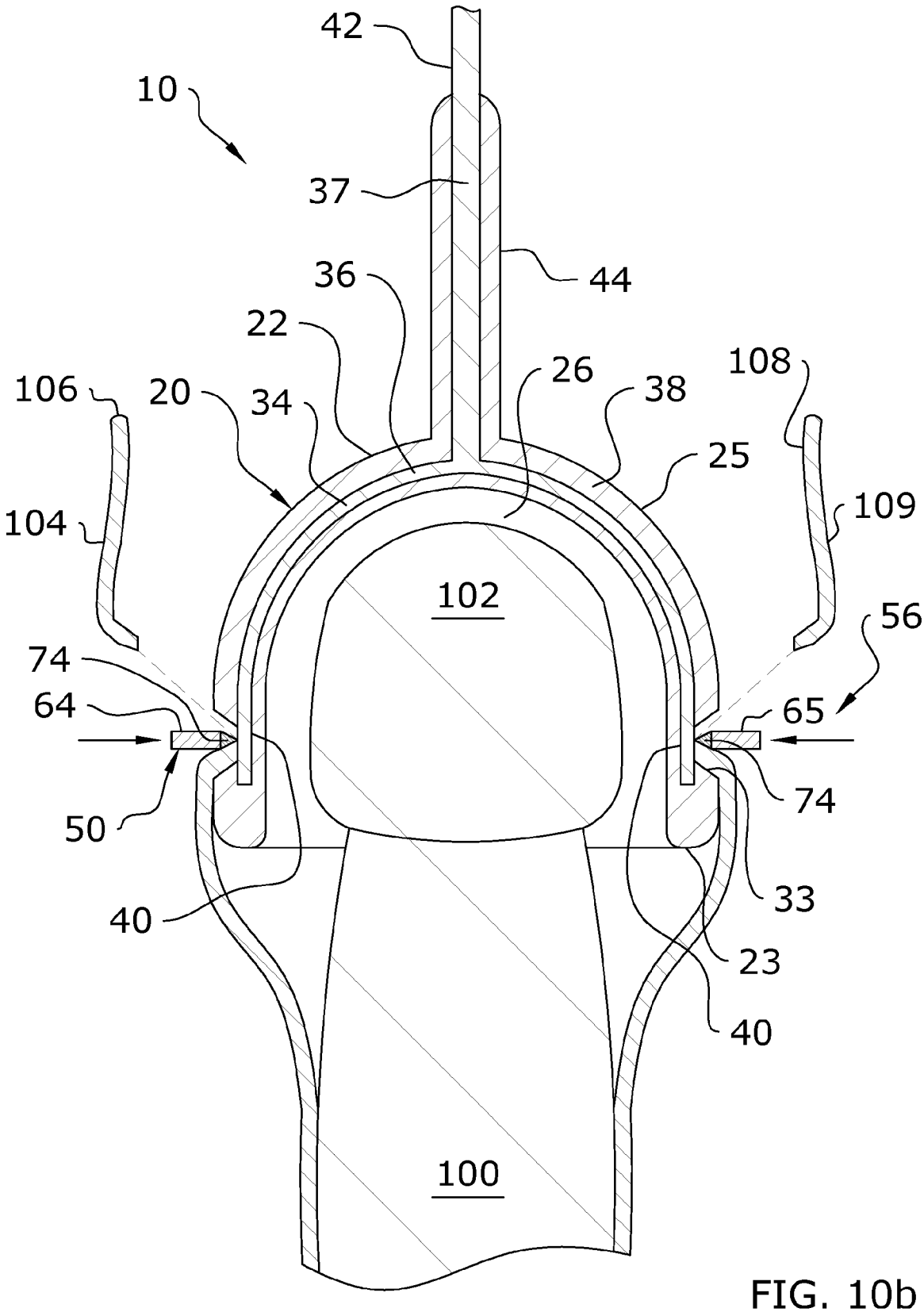
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FIG. 10b

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2014/067301

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B17/326
ADD. A61B18/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 625 218 A (VALINOTI JOSEPH R JR) 7 December 1971 (1971-12-07) abstract; figures 1-7 column 1, lines 21-23,34-36 column 2, line 13 - column 3, line 18 column 3, lines 66-72 column 4, lines 11-12, 29-34	1-16
X	US 3 111 124 A (SIMON RODBARD) 19 November 1963 (1963-11-19)	1-4
A	abstract; figures 1-4 column 1, lines 6-30 column 2, lines 4-66	5-16

-/--

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
25 February 2015	04/03/2015

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Moualed, Laura

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Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2014/067301

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 1 256 208 A (CUMMINS EDWARD M [US]) 12 February 1918 (1918-02-12) abstract; figures 1-4 column 1, line 26 - column 2, line 90 -----	1,3,4, 8-13,15, 16
A	CN 203 226 877 U (WANG XIAOLONG) 9 October 2013 (2013-10-09) abstract; figure 3 -----	1-4, 8-13,15, 16
A	CN 203 524 743 U (JIANGXI YUANSHENGLANGHE MEDICAL EQUIPMENT CO LTD) 9 April 2014 (2014-04-09) abstract; figures 1-3 -----	1-4, 8-13,15, 16
A	US 2003/171747 A1 (KANEHIRA EIJI [JP] ET AL) 11 September 2003 (2003-09-11) abstract; figure 2 paragraphs [0002] - [0004], [0007] - [0014], [0036] -----	1-5, 8-13,15, 16
A	EP 2 425 791 A1 (TYCO HEALTHCARE [US]) 7 March 2012 (2012-03-07) abstract; figures 1-96 paragraphs [0008] - [0016] -----	1-5, 8-13,15, 16

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2014/067301

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.: 17-20
because they relate to subject matter not required to be searched by this Authority, namely:

Pursuant to Article 17(2)(a)(i) and Rule 39.1 (iv) PCT, the subject-matter of claims 17 to 20 has not been searched, since it is directed to a method for treatment of the human body by surgery (step of performing a circumcision procedure).

2. [ ] Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

[ ] The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

[ ] No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2014/067301

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3625218 A	07-12-1971	NONE	
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CN 203524743 U	09-04-2014	NONE	
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