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(54) **TUBE FOR BLOOD PRESSURE CUFF AND BLOOD PRESSURE CUFF**

(71) Applicant: **Nihon Kohden Corporation**, Tokyo (JP)

(72) Inventors: **Teishi Oishi**, Tokyo (JP); **Takashi USUDA**, Tokyo (JP)

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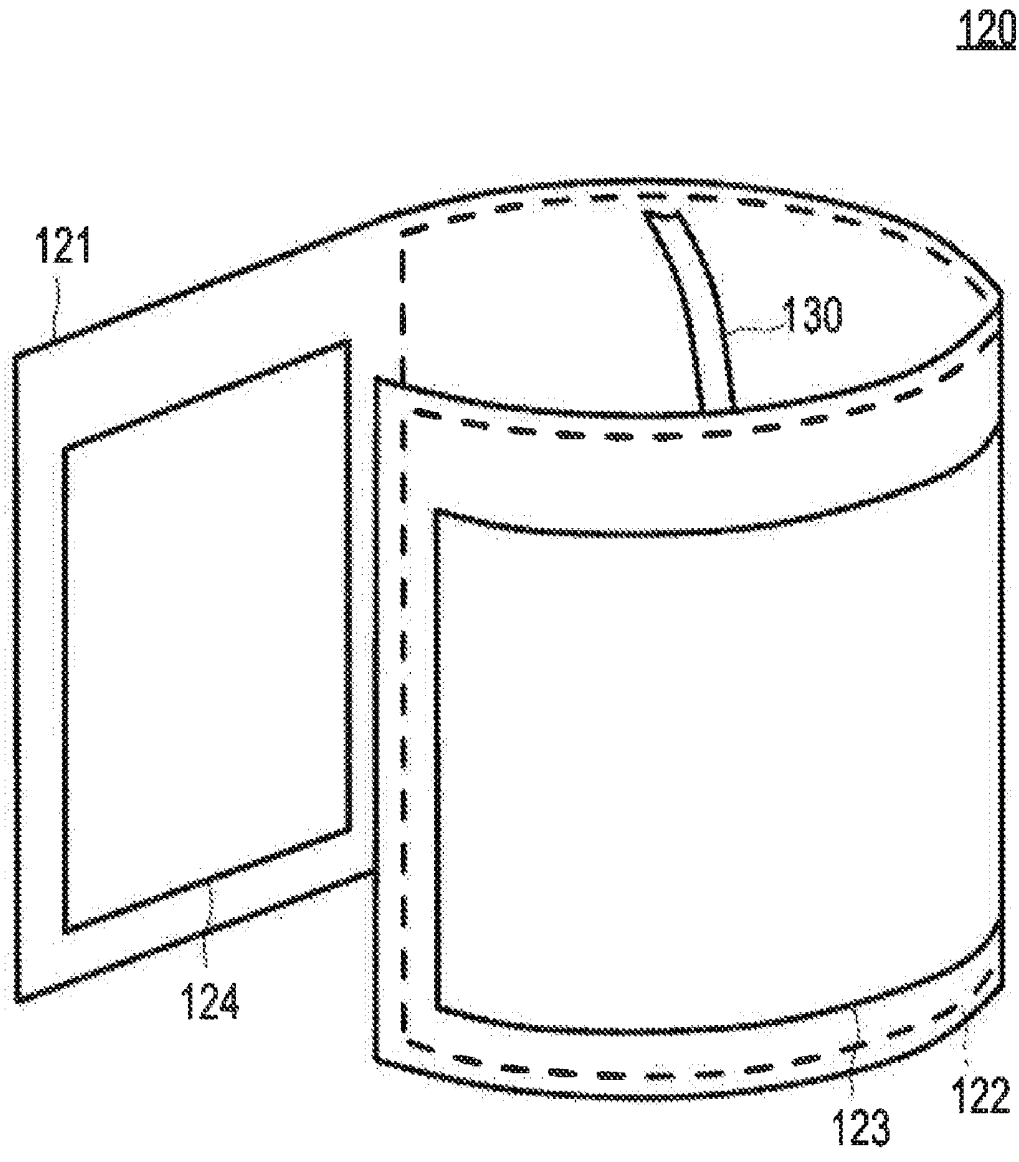
CPC ***A61B 5/0235*** (2013.01); ***A61B 5/742*** (2013.01)

(57) **ABSTRACT**

A tube for a blood pressure cuff includes a hollow and long shape, and plural projection portions projecting toward a center of a regular polygon in correspondence with vertices of the regular polygon which inscribes in an outer circumference and has 5 or more angles, in a shape of an inner circumference in a cross section perpendicular to a longitudinal direction of the cuff tube.



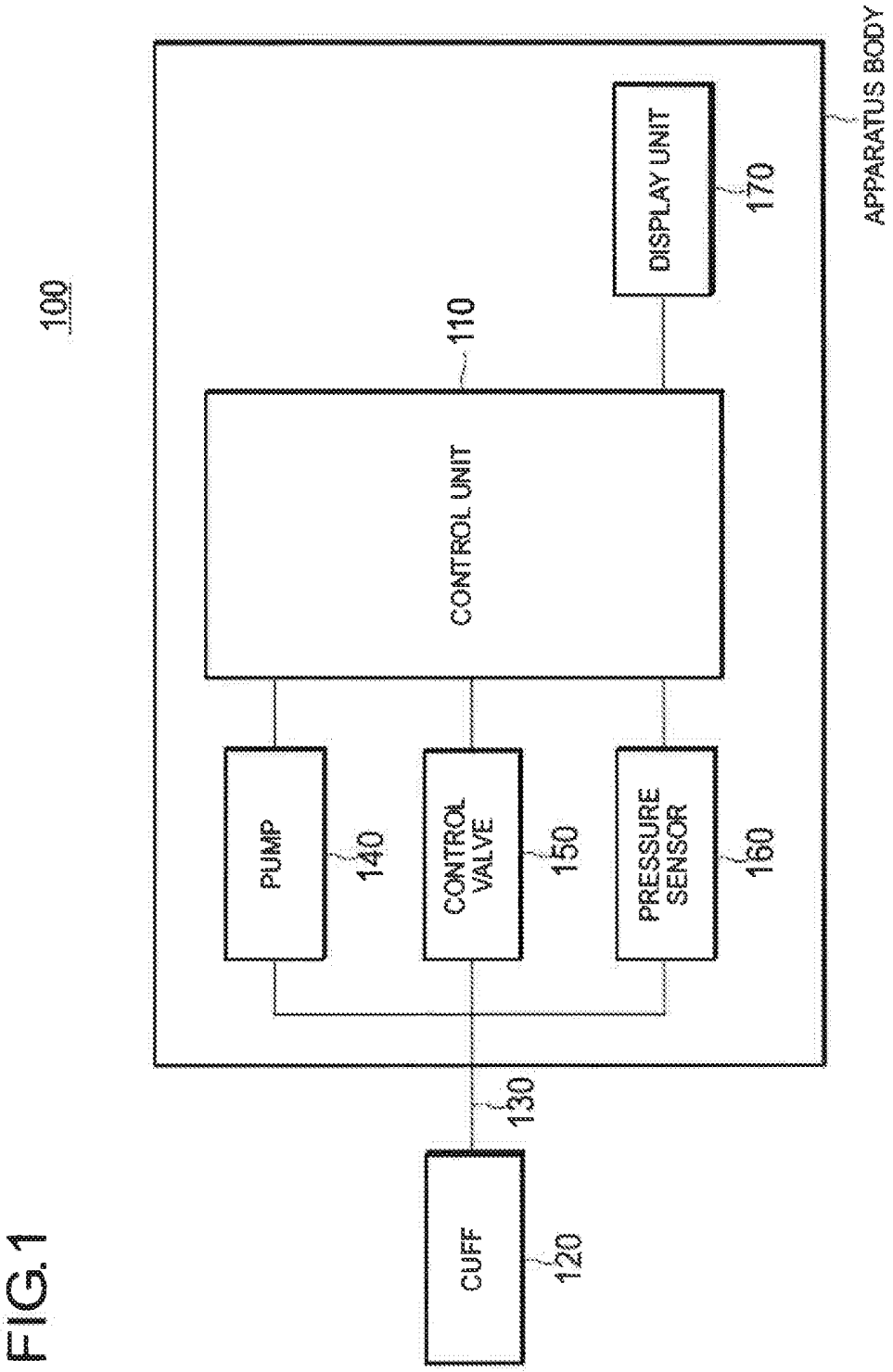
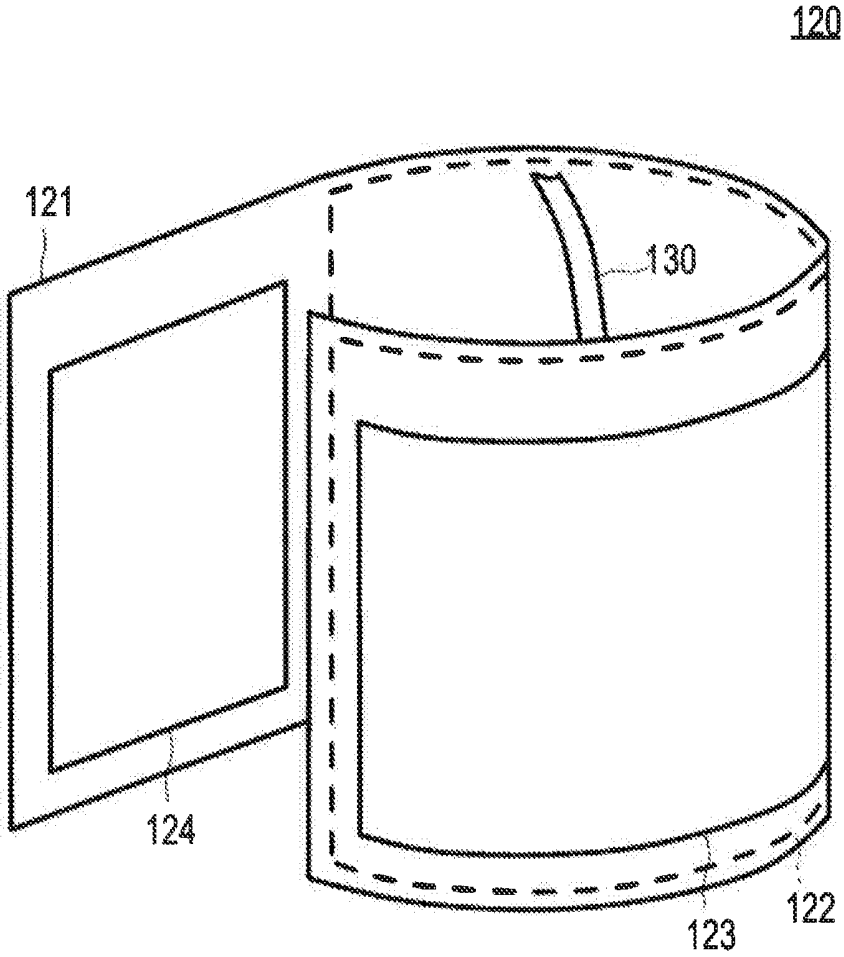

100
APPARATUS BODY
DISPLAY UNIT
170
110
CONTROL UNIT
PUMP
140
CONTROL VALVE
150
PRESSURE SENSOR
160
130
CUFF
120

FIG. 1

FIG.2



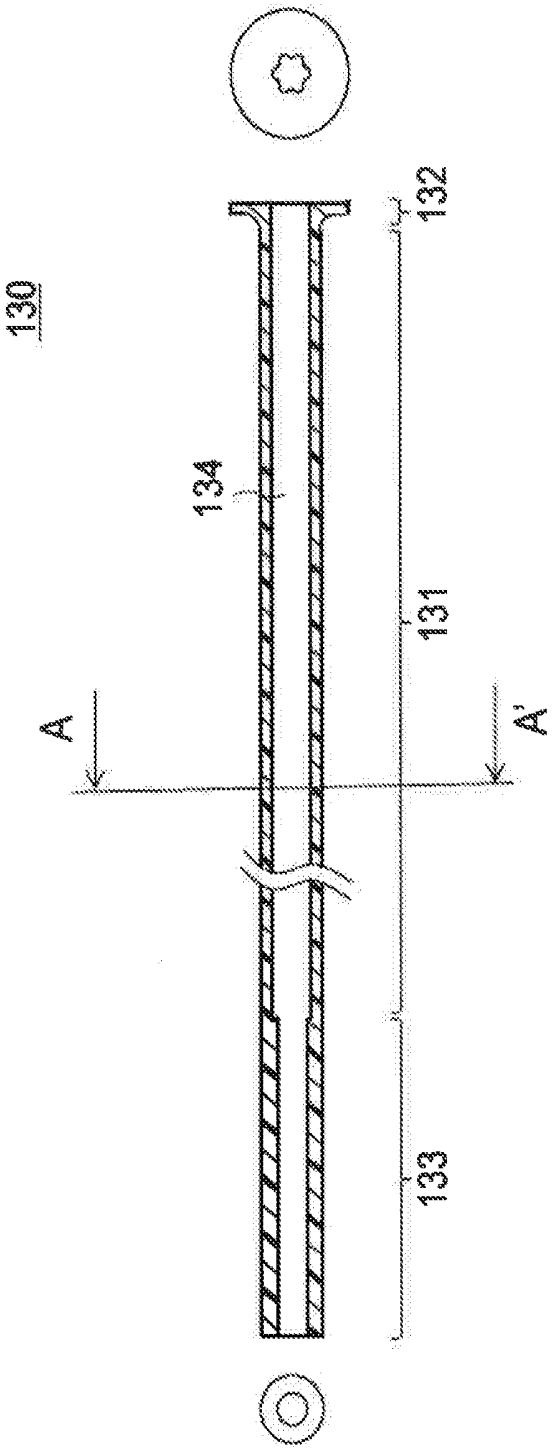


FIG.3

FIG.4

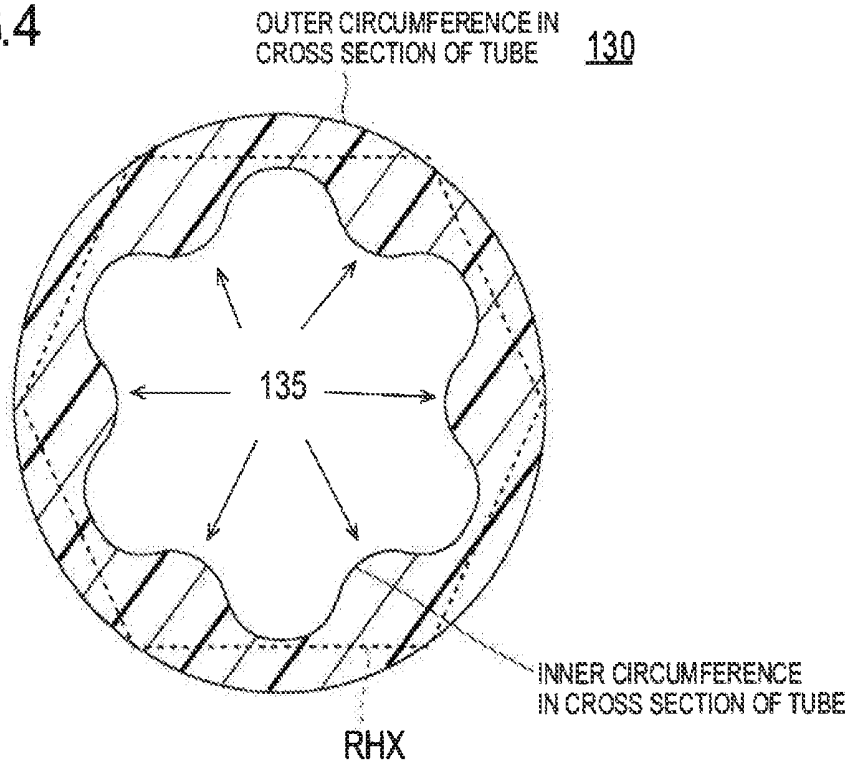

OUTER CIRCUMFERENCE IN CROSS SECTION OF TUBE
130
135
INNER CIRCUMFERENCE IN CROSS SECTION OF TUBE
RHX

FIG.5

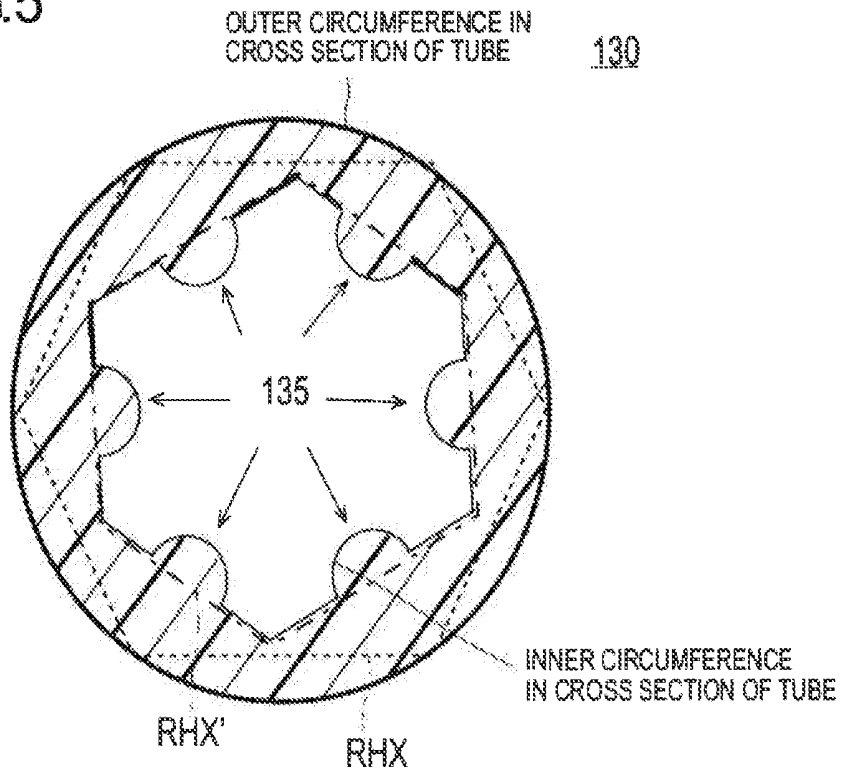

OUTER CIRCUMFERENCE IN CROSS SECTION OF TUBE
130
135
INNER CIRCUMFERENCE IN CROSS SECTION OF TUBE
RHX'
RHX

FIG.6

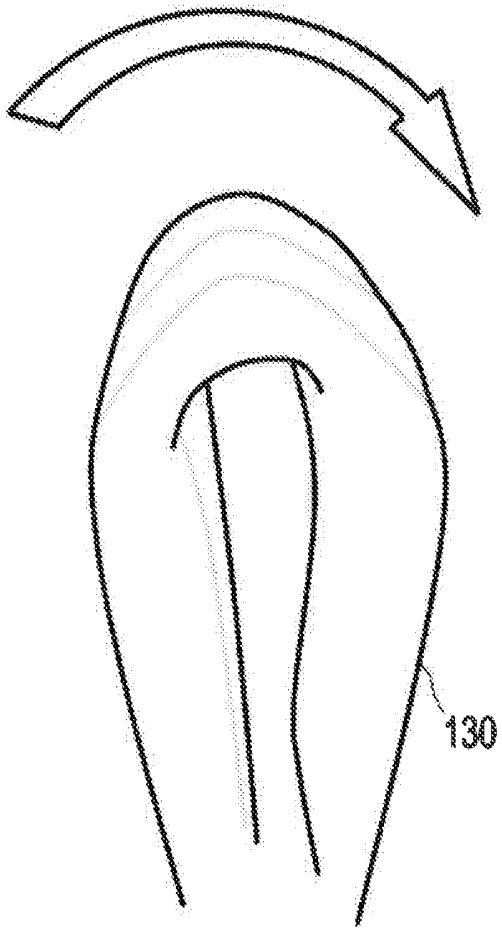
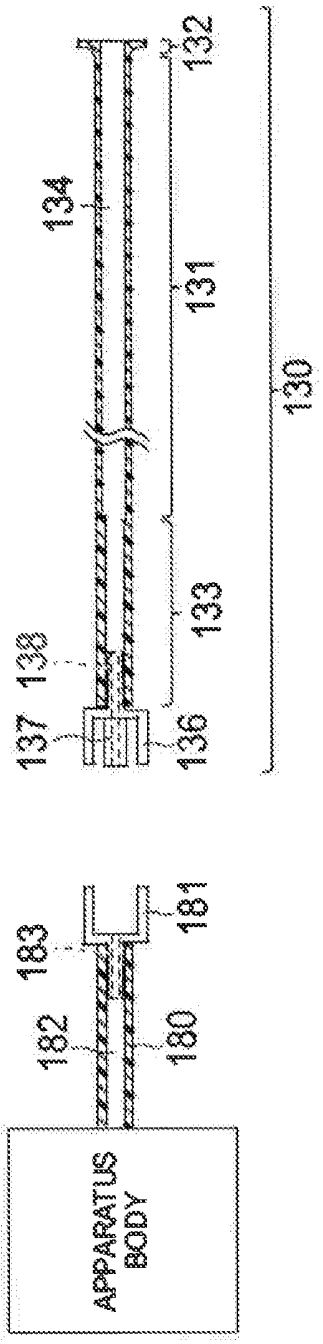


FIG.7



TUBE FOR BLOOD PRESSURE CUFF AND BLOOD PRESSURE CUFF

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims a priority under the Paris Convention of Japanese patent application No. 2016-177017 filed on Sep. 9, 2016, the entirety of which is incorporated herein by references.

BACKGROUND

[0002] The presently disclosed subject matter relates to a tube for a blood pressure cuff and a blood pressure cuff.

[0003] In a blood pressure measurement by using the oscillometric method, a cuff pressure applied to an upper arm of a patient by a cuff wrapped to the upper arm is set to a value higher than a systolic blood pressure, and the upper arm is pressurized to a target value by sending air into the cuff from a sphygmomanometer body through a tube. Then, a blood pressure is measured by gradually discharging the air from the cuff through the tube to reduce the cuff pressure and detecting an oscillation generated in the cuff due to a pulse wave of the patient.

[0004] However, the tube connecting the cuff and the sphygmomanometer may be bent and kinked as a result of, for example, the patient changing the body position thereof during blood pressure measurement, and an air flow path the tube may thus be occluded. If the air flow path in the tube is occluded, air cannot be sent into the cuff, and the blood pressure measurement cannot be performed. Further, air cannot be discharged from the cuff, and thus the applied cuff pressure is kept without being reduced. This may continuously put a relatively large strain on the upper arm of the patient.

[0005] Unexamined Japanese Patent Publication No. 2004-223102 discloses a cuff tube for preventing the occlusion of the tube. That is, an elastic hose constituting the tube is configured so as to have an inner circumferential shape that is an approximate triangle or an approximate pentagon constituted by plural straight line portions and plural arc portions interconnecting the plural straight line portions in a cross section. In addition, in the cross section, the thickness of the tube corresponding to the interval between the inner circumference and the outer circumference of a circular shape, is configured to be contrary between symmetrical positions with respect to the central axis of the tube. According to this, the tube is less likely to be bent in the blood pressure measurement, and an air flow path in the cross section is secured even in the case where the tube is bent.

SUMMARY

[0006] However, in the case where the inner circumferential shape of the tube in the cross section is configured to be a shape different from a circle as in the related art described above, the air flow path in the tube may still be occluded depending on a direction in which the tube is bent. In other words, in the case of the tube having an approximately triangular inner circumferential shape in the cross section, possibility of the tube being occluded may be different between a case where the tube is bent along a straight line passing through an arc portion and a straight line portion which is opposed to the arc portion across the center axis and a case where the tube is bent along a straight line passing through a straight line portion and another straight line portion which is opposed to the straight line portion across the center axis. Therefore, the tube may be occluded when bent in a certain direction even if the tube is not occluded when bent in another direction.

[0007] Therefore, the presently disclosed subject matter is to provide a tube for a blood pressure cuff that is capable of reducing inclination of occlusion due to the bending direction such as the difference in occurrence of occlusion depending on the bending direction of the tube, and capable of preventing the occlusion of the tube regardless of the bending direction.

[0008] An aspect of the tube for a blood pressure cuff reflecting one aspect of the presently disclosed subject matter comprises a hollow and long shape, and plural projection portions projecting toward a center of a regular polygon in correspondence with vertices of said regular polygon which inscribes in an outer circumference and has 5 or more angles, in a shape of an inner circumference in a cross section perpendicular to a longitudinal direction of the cuff tube.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. **1** is a block diagram of a blood pressure measurement apparatus using a blood pressure cuff and a tube for a blood pressure cuff according to an embodiment of the presently disclosed subject matter;

[0010] FIG. **2** is a perspective view of the cuff illustrating a configuration thereof;

[0011] FIG. **3** includes a cross section view of the tube according to the embodiment of the presently disclosed subject matter of cutting along the longitudinal direction of the tube and side views of both ends of the tube;

[0012] FIG. **4** is a cross section view of the tube of cutting along A-A' illustrated in FIG. **3**;

[0013] FIG. **5** is a cross section view of a deformed section portion of the tube according to another exemplary embodiment of the presently disclosed subject matter;

[0014] FIG. **6** illustrates a state in which the tube is bent; and

[0015] FIG. **7** illustrates a configuration of the tube in which a relay portion is provided on an end of a straight portion of the tube.

DETAILED DESCRIPTION

[0016] A tube for a blood pressure cuff and a blood pressure cuff according to an embodiment of the presently disclosed subject matter will be described below with reference to drawings. The dimensional ratio in the drawings is exaggerated for the convenience of description, and may be different from the actual ratio.

[0017] FIG. **1** is a block diagram of a blood pressure measurement apparatus using the blood pressure cuff and the tube for the blood pressure cuff according to the embodiment of the presently disclosed subject matter. A blood pressure measurement apparatus **100** performs measurement of blood pressure by using, for example, an oscillometric method.

[0018] The blood pressure measurement apparatus **100** can include a control unit **110**, a cuff **120**, a tube **130**, a pump **140**, a control valve **150**, a pressure sensor **160**, and a display unit **170**. The tube **130** constitutes the tube for the blood pressure cuff. The cuff **120** and the tube **130** constitute the blood pressure cuff.

[0019] The control unit **110**, the pump **140**, the control valve **150**, the pressure sensor **160**, and the display unit **170** may be included in an apparatus body of the blood pressure measurement apparatus **100**. The tube **130** is connected to a connector of the apparatus body, and the apparatus body is thereby connected to the cuff **120** via the tube **130**.

[0020] FIG. **2** is a perspective view of the cuff illustrating a configuration thereof.

[0021] The cuff **120** can include a body **121**, a bladder **122**, the tube **130**, and a hook and loop fastener having a hook surface **123** and a loop surface **124**.

[0022] The cuff **120** can be wrapped around an upper arm of a patient in blood pressure measurement by binding the hook surface **123** and the loop surface **124** together. For simplicity of description, the description will be given hereinbelow on the premise that the cuff **120** is wrapped to the upper arm of the patient.

[0023] The body **121** of the cuff **120** may be formed of a synthetic resin such as polyester or nylon.

[0024] The bladder **122** may be formed by forming a part of the body **121** to have a double-layered structure and fusing the periphery to provide a sealed inner space.

[0025] The tube **130** has a hollow and long shape and is formed of an elastic material. The tube **130** may be formed of, for example, polyvinyl chloride, polyethylene, or polypropylene. The tube **130** includes, in the shape of the inner circumference in a cross section perpendicular to the longitudinal direction (hereinafter referred to as a "cross section"), plural projection portions projecting toward the center of a regular polygon in correspondence with respective vertices of the regular polygon. The regular polygon includes 5 or more angles and is inscribed in the outer circumference of the tube in the cross section. To be noted, the regular polygon does not have to be inscribed in the outer circumference.

[0026] The tube **130** is connected to the bladder **122** such that the bladder **122** communicates with an air flow path **134** of the tube **130**. A flange **132** integrally formed in one piece with the tube **130** may be provided on the periphery of one end of the tube **130**. The flange **132** may have, for example, a collar shape in which the flange **132** projects around the tube **130** like eaves. The flange **132** on the end of the tube **130** is inserted in the inner space of the bladder **122** through a small opening portion provided in the bladder **122**, and the flange **132** is fused with the periphery of the small opening portion. As a result of this, the air flow path **134** of the tube **130** is communicably connected with the inner space of the bladder **122**, so that the tube **130** and the bladder **122** are connected to each other.

[0027] The flange **132** may not be integrally formed in one piece with the tube **130**. For example, separately from the tube **130**, a relatively short tube-like component formed of nylon (registered trademark) in the periphery of one end of which a flange is provided may be produced, and the flange may be inserted in the small opening portion of the bladder **122** and fused with the periphery of the small opening portion. Then, the tube **130** and the bladder **122** may be connected by inserting the other end of the tube-like component in the lumen of the tube **130** and fusing the other end with the tube **130**.

[0028] Referring back to FIG. **1**, the pump **140** pressurizes the cuff **120** wrapped to the upper arm of the patient by sending air into the bladder **122** of the cuff **120** wrapped to the upper arm of the patient through the tube **130**.

[0029] The air bladder is inflated or deflated by the control valve **150** which is opened and closed.

[0030] The pressure sensor **160** detects the pressure of the air inside the bladder **122** of the cuff **120** (hereinafter referred to as "cuff internal pressure"), and transmits the result of detection to the control unit **110**. The pressure sensor **160** is, for example, a piezoresistive pressure sensor, and transmits the detected cuff internal pressure to the control portion **110** as an electric signal.

[0031] The control unit **110** may be constituted by a central processing unit (CPU), a program, and a random access memory (RAM). The control portion **110** executes various arithmetic processing by the CPU in accordance with the program by using the RAM as a work area, and controls each constituent of the blood pressure measurement apparatus **100**.

[0032] When the pump **140** pressurizes the cuff **120**, the control unit **110** calculates a cuff pressure applied to the upper arm of the patient based on the cuff internal pressure detected by the pressure sensor **160**. The control unit **110** controls the flow rate of the air sent into the cuff **120** from the pump **140** based on the calculated cuff pressure. The control unit **110** raises the pressure of the cuff **120** until the cuff pressure reaches a pressurizing target value set to a higher value than a systolic blood pressure of the patient.

[0033] When reducing the cuff pressure by controlling the control valve **150**, the control unit **110** calculates a pressure reduction range of the cuff pressure applied to the upper arm of the patient based on the cuff internal pressure detected by the pressure sensor **160**. The control unit **110** controls the flow rate of the air discharged from the cuff **120** by controlling the control valve **150** based on the calculated pressure reduction range of the cuff **120**. In addition, the control unit **110** calculates the amplitude of a pulse wave of the patient based on the cuff internal pressure detected by the pressure sensor **160**, and further calculates the systolic blood pressure and a diastolic blood pressure based on a change in the amplitude of the pulse wave.

[0034] The display unit **170** is constituted by, for example, a liquid crystal display, and displays the calculated systolic blood pressure and diastolic blood pressure.

[0035] FIG. **3** includes a cross section view of the tube **130** according to the embodiment of the presently disclosed subject matter of cutting along the longitudinal direction of the tube **130** and side views of both ends of the tube **130**. FIG. **4** is a cross section view of the tube **130** of cutting along A-A' illustrated in FIG. **3**.

[0036] The tube **130** includes a deformed section portion **131** which is a region including plural projection portions **135** on the inner circumference thereof in the cross section of cutting along A-A'. In addition, the tube **130** may include a straight portion **133** (circular section) which does not have the projection portions **135** in the shape of the inner circumference in the cross section in a region within a predetermined distance from one end thereof in the longitudinal direction. According to this, it is not required that a connector of the apparatus body is provided with a recess corresponding to the projection portions **135** and the tube **130** is connected to the connector by inserting the tube **130** in the connector by matching the projection portions **135** with the recess. Thus, complication of the connection process can be prevented, and connectivity as good as a normal tube can be maintained. A distance sufficient for connecting

the tube **130** to the connector of the apparatus body may be set as the predetermined distance.

[0037] The deformed section portion **131** includes, in the shape of the inner circumference of the tube **130** in the cross section, the plural projection portions **135** projecting toward the center of a regular polygon RHX in correspondence with respective vertices of the regular polygon RHX. The regular polygon RHX includes 5 or more angles and is inscribed in the circular outer circumference. In other words, the deformed section portion **131** has a structure in which the wall thickness periodically increases at every predetermined angle (60 degrees in the case where the regular polygon RHX is a regular hexagon) relative Lo the center axis of the tube **130** along the inner wall surrounding the air flow path **134**.

[0038] The plural projection portions **135** in the shape of the inner circumference of the tube **130** in the cross section are preferably provided in correspondence with respective vertices of a regular hexagon inscribed in the outer circumference.

[0039] The tube **130** is produced by, for example, injection molding of polyvinyl chloride. Specifically, a cavity of a mold for molding polyvinyl chloride into a long cylindrical shape is filled with polyvinyl chloride by injecting the polyvinyl chloride into the cavity. At this time, a long pin for making the long shape into a hollow shape is disposed at the center of the cavity so as to penetrate the polyvinyl chloride filling the cavity. Then, after undergoing a cooling process, the mold is released, and the pin is pulled out of a molded article. Straight-line recesses for forming the plural projection portions **135** projecting in the cross section of the tube **130** are provided on the surface of the pin. In the case of providing the straight portion **133**, the straight-line recesses for forming the plural projection portions **135** projecting in the cross section of the tube **130** in a region within a predetermined distance from one end of the tube **130** in the longitudinal direction, are not provided on the surface of the pin.

[0040] FIG. **5** is a cross section view of the deformed section portion **131** of the tube **130** according to another embodiment of the presently disclosed subject matter.

[0041] The tube **130** illustrated in FIG. **5** is similar to the tube **130** illustrated in FIG. **4** in including, in the shape of the inner circumference of the tube **130** in the cross section, the plural projection portions **135** projecting toward the center of a regular polygon RHX in correspondence with respective vertices of the regular polygon RHX. The regular polygon RHX includes 5 or more angles and is inscribed in the outer circumference. However, the tube **130** illustrated in FIG. **5** is different from the tube **130** illustrated in FIG. **4** in that the shape of the inner circumference of the tube **130** in the cross section includes the projection portions **135** in respective sides of another regular polygon RHX' having the same number of angles as the regular polygon RHX. The shape of the projection portions **135** in the shape of the inner circumference of the tube **130** in the cross section illustrated in FIG. **5** may be a semicircular shape projecting from each side of the other regular polygon RHX' having the same number of angles as the regular polygon RHX.

[0042] FIG. **6** illustrates a state in which the tube **130** is bent.

[0043] According to the structure of the deformed section portion **131** described above, the tube **130** is not occluded even when bent by 180 degrees and thus air flows therethrough in a direction indicated by an arrow. This is because an area of flow path to let the air pass through the tube **130** is secured by providing the plural projection portions **135** in the tube **130** in the cross section when the tube **130** is bent.

[0044] Further, according to the structure of the deformed section portion **131** described above, the tube **130** is not occluded and thus air flows therethrough regardless of the direction in which the tube **130** is bent. This is because the number of the projection portions **135** is set to 5 or more corresponding to the vertices of the regular polygon RHX having 5 or more angles as a result of the diligence of the present inventors having confirmed the following fact. That is, the inclination of occlusion according to the bending direction depends on the number of the projection portions **135** of the inner circumference of the tube **130** in the cross section provided in correspondence with the vertices of the regular polygon RHX inscribed in the outer circumference in the cross section. The inclination of occlusion does not occur by setting the number of the projection portions **135** to 5 or more in correspondence with the vertices of the regular polygon RHX having 5 or more angles. In contrast, in the case where the projection portions **135** are provided in correspondence with vertices of a regular polygon RHX having less than 5 angles, the inclination of occlusion occurs.

[0045] The cause of this is considered to be as follows. That is, in the case where the projection portions **135** are provided in correspondence with the regular polygon RHX having less than 5 angles, the tube **130** is twisted when the tube **130** is bent because the bending force is escaped to a part that can be easily deformed. The degree of the twisting depends on the bending direction. The tube **130** becomes more likely to be occluded when twisted, thus the tube **130** is occluded when bent in a direction in which the degree of twisting becomes relatively larger. In contrast, in the case where the projection portions **135** are provided in correspondence with the vertices of the regular polygon RHX having 5 or more angles, the twisting of the tube **130** caused as a result of the bending force being escaped to the part that can be easily deformed is suppressed. According to this, the inclination of occlusion according to the bending direction is reduced, and occlusion of the tube **130** is prevented regardless of the bending direction.

[0046] Further, in the case where the projection portions **135** are provided in correspondence with the vertices of the regular polygon RHX having less than 5 angles and the tube **130** is bent multiple times, the tube **130** comes to have a tendency to be more easily bent in a particular direction due to the twisting of the tube **130** caused when the tube **130** is bent. Such a tendency makes the tube **130** more likely to be occluded. By providing the projection portions **135** in correspondence with the vertices of the regular polygon RHX having 5 or more angles, the twisting resulting from bending is suppressed, and thus the tube **130** is prevented from having such a tendency.

[0047] FIG. **7** illustrates a configuration of the tube **130** in which a relay portion **136** is provided on an end of the straight portion **133** of the tube **130**. In FIG. **7**, the apparatus body of the blood pressure measurement apparatus **100**, a body-side tube **180** connected to the apparatus body, and a relay connector **181** provided on an end of the body-side tube **180** are also illustrated.

[0048] The tube **130** includes the relay portion **136** on an end of the straight portion **133**. The body-side tube **180** and

the tube **130** communicate with each other by connecting the relay portion **136** with the relay connector **181** provided on the end of the body-side tube **180**.

[0049] The relay portion **136** and the relay connector **181** may be connected by, for example, providing the relay portion **136** and the relay connector **181** with a projection structure and a recess structure, respectively, and inserting the projection structure in the recess structure. In addition, the relay portion **136** and the relay connector **181** may respectively include a through hole **137** and a through hole **183** for the air flow path **134** of the tube **130** and an air flow path **182** of the body-side tube **180** to communicate with each other when the relay portion **136** and the relay connector **181** are connected with each other.

[0050] The configuration of the relay portion **136** and the relay connector **181** is not limited to the configuration described above. For example, the relay portion **136** may be provided with a recess structure and the relay connector **181** may be provided with a projection structure.

[0051] The shape of the inner circumference of the body-side tube **180** in a cross section is preferably formed to be circular similarly to the straight portion **133** of the tube **130**.

[0052] The relay portion **136** may be provided with an insertion portion **138**, and the insertion portion **138** may be inserted in the end of the straight portion **133** of the tube **130**. In this way, the relay portion **136** may be provided on the end of the straight portion **133** of the tube **130**.

[0053] The relay portion **136** may be integrally formed in one piece with the tube **130**. In other words, the relay portion **136** may be molded at the same time with molding of the tube **130** from the same material as the tube **130**.

[0054] The present embodiment achieves the following effects.

[0055] In the shape of the inner circumference in the cross section of the tube, plural projection portions projecting in correspondence with vertices of the regular polygon having 5 or more angles and inscribed in the shape of the outer circumference in the cross section are provided. According to this, when the tube is bent, twisting of the tube occurring as the result of the bending force escaping to the part that can be easily deformed is suppressed. Thus, inclination of occlusion according to the bending direction is reduced, and occlusion of the tube is prevented regardless of the bending direction.

[0056] Further, the shape of the inner circumference in the cross section of the tube is configured as the shape in which the projection portion is provided in each side of another regular polygon having angles of the same number as the regular polygon inscribed in the outer circumference. According to this, the inclination of occlusion according to the bending direction is effectively reduced, and occlusion of the tube is effectively prevented regardless of the bending direction.

[0057] Further, the projection portions are each configured to have such a shape as to project in the semicircular shape in each side of another regular polygon in the shape of the inner circumference in the cross section. According to this, a sufficient section area for air to pass through is secured regardless of the bending direction, and thus an effect of preventing occlusion of the tube resulting from bending can be enhanced.

[0058] Further, the tube does not have the projection portions in the shape of the inner circumference in the cross section in a region within the predetermined distance from one end thereof in the longitudinal direction. According to this, it is not required that a connector of the apparatus body is provided with recesses corresponding to the projection portions and the tube is connected to the connector by inserting the tube in the connector by matching the projection portions with the recesses. Thus, complication of the connection process can be prevented, and connectivity as good as a normal tube can be maintained.

[0059] Further, the flange is provided in the collar shape on the periphery of the ocher end of the long shape. According to this, it is not required to additionally produce a component including a flange and connecting the tube with the component, and thus the cost can be reduced.

[0060] Further, the plural projection portions in the shape of the inner circumference in the cross section of the tube are provided in correspondence with vertices of the regular hexagon inscribed in the outer circumference in the cross section. According to this, the area of the flow path through which air in the tube passes when the tube is bent can be increased, and thus occlusion of the tube resulting from bending the tube can be prevented more certainly.

[0061] Further, the relay portion is provided on the end of the long shape in which the projection portions are not provided in the shape of the inner circumference in the cross section. The relay portion is communicable with the body-side tube by being connected to the relay connector provided on the end of the body-side tube, and the body-side tube is connected to the body of the blood pressure measurement apparatus. According to this, the tube can be connected to the body-side tube connected to the body of the blood pressure measurement apparatus easily and without causing an air leakage.

[0062] The tube for the blood pressure cuff and the blood pressure cuff according to the embodiments of the presently disclosed subject matter has been described above. However, the presently disclosed subject matter is not limited to the embodiments.

[0063] For example, although the cuff has been described to be wrapped to the upper arm of the patient in the embodiment described above, the cuff may be wrapped to other parts than the upper arm. For example, the cuff may be wrapped to a thigh or to a lower thigh.

[0064] In the embodiment described above, the flange is formed in the collar shape on the periphery of one end of the tube, and the flange having the collar shape is fused with the periphery of the small opening portion of the bladder. However, a tube on the periphery of which the flange is not provided may be used, the flange of the collar shape may be formed by deforming one end of the tube by heat, and the formed flange may be fused with the periphery of the small opening portion of the bladder.

[0065] The apparatus body of the blood pressure measurement apparatus may be a transmitter having a transmission function for transmitting the measured value of blood pressure.

[0066] Although the regular polygon having 5 or more angles and inscribed in the outer circumference in the cross section of the tube has been described in the embodiment described above, an approximately regular polygon is also included in the scope of the presently disclosed subject matter as long as the effect of the presently disclosed subject matter is achieved.

What is claimed is:

1. A tube for a blood pressure cuff comprising:

a hollow and long shape; and

plural projection portions projecting toward a center of a regular polygon in correspondence with vertices of said regular polygon which inscribes in an outer circumference and has 5 or more angles, in a shape of an inner circumference in a cross section perpendicular to a longitudinal direction of the tube.

2. The tube for the blood pressure cuff according to claim **1**, wherein

the shape of the inner circumference in the cross section comprises the projection portions in respective sides of another regular polygon having angles of the same number as said regular polygon.

3. The tube for the blood pressure cuff according to claim **2**, wherein

the projection portions each project in a semicircular shape in each side of said another regular polygon in said shape of the inner circumference in the cross section.

4. The tube for the blood pressure cuff according to claim **1**, wherein

said shape of the inner circumference in the cross section does not include said projection portions in a region within a predetermined distance from one end of said long shape in said longitudinal direction.

5. The tube for the blood pressure cuff according to claim **4**, further comprising:

a flange provided in a collar shape on a periphery of another end of said long shape.

6. The tube for the blood pressure cuff according to claim **1**, wherein

said regular polygon is a regular hexagon.

7. The tube for the blood pressure cuff according to claim **4**, further comprising:

a relay portion on said one end of said long shape, the relay portion being communicable with a body-side tube by being connected to a relay connector provided on an end of said body-side tube, the body-side tube being connected to a body of a blood pressure measurement apparatus.

8. The tube for the blood pressure cuff according to claim **1**, wherein

the shape of inner circumference in the cross section is circular in a region within a predetermined distance from one end of the long shape in the longitudinal direction.

9. A blood pressure cuff comprising the tube for the blood pressure cuff according to claim **1**.

* * * * *

专利名称(译)	用于血压袖带和血压袖带的管		
公开(公告)号	US20180070835A1	公开(公告)日	2018-03-15
申请号	US15/597413	申请日	2017-05-17
[标]申请(专利权)人(译)	日本光电工业株式会社		
申请(专利权)人(译)	日本光电公司		
当前申请(专利权)人(译)	日本光电公司		
[标]发明人	OISHI TEISHI USUDA TAKASHI		
发明人	OISHI, TEISHI USUDA, TAKASHI		
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摘要(译)

本发明提供一种血压袖带用管，该血压袖带用管具有中空且长的形状，以及与内外接的正多边形的顶点对应的正多边形的中央突出且具有5个以上角度的多个突起部，在与所述套囊管的长度方向垂直的截面中的内周的内径。