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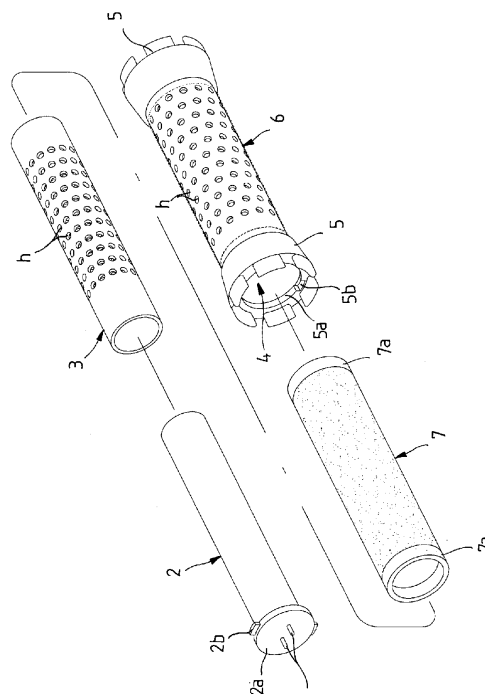
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(54) **HAIR CURLING ROD FOR PERMANENT WAVE**

(57) The present invention relates to a hair curling rod for permanent waves which effectively supplies heat, generated from a detachable heater integral to the curling rod, hot moisture and a hair nourishing agent, which neutralize and achieve the desired permanent wave and maintains the permanent wave hair over an extended period. The hair curling rod for permanent waves according to the present invention comprises heater rod (2) with terminal (1) where a power cord is detachably connected; outer perforated tube (6) which has an inner space (4) for accommodating said heater rod (2) and left and right ends with handles (5); and absorptive element (7) made from cotton or a non-woven material for absorbing moisture or a liquid hair nourishing agent, and which is detachably disposed between inner perforated tube (3) and said outer perforated tube (6), and inserted into inner space (4) of said perforated tube (6), wherein said heater rod (2) is detachably inserted into and interlocked with said perforated tube (6).

[Fig. 1]



Description

TECHNICAL FIELD

[0001] The present invention relates to a hair curling rod for permanent wave, more specifically, a hair curling rod for permanent wave which can effectively supply hair with moisture and hair nourishing agent in perming operation and finish the hair by means of hot moisture and then neutralize the finished hair to maintain its shape.

BACKGROUND ART

[0002] The permanent wave is achieved at beauty shop through the following procedures, wherein in general perm lotion is applied to a comb and the perm lotion is evenly applied to the whole hair while the hair is combed with the comb with the perm lotion applied thereto, and thereafter the hair is wrapped and fixed on the hair curling rod housing a heating body while being properly divided, and heat is applied to the hair for a predetermined time and then neutralization agent is applied to the whole hair and thereafter the fixed hair curling rod is separated from the hair.

[0003] Meanwhile, in such a perming operation, there is a problem that the hair is easily dried by the heat and therefore the hair is damaged, and in order to solve this problem, non-woven material is wrapped on surface of the hair curling rod with the hair wrapped thereon, whereby moisture can be prevented from being evaporated. However, another problem is present that moisture in the heated hair can not effectively prevented from being discharged outward.

[0004] Several devices have been developed which can supply the moisture in perming operation in order to solve the above-mentioned problems, however these devices have disadvantages that they are complex in terms of structure and are not convenient to use. Prior arts related to the present invention will be described as follows.

[0005] As an example of prior arts related to the present invention, a steam hair curling rod device disclosed in U.M. Registration No. 0320602 may be mentioned. As illustrated in Fig. 6, the device comprises several hair curling rods (20) comprising a steam generator (not shown in the figure) for generating the steam for a predetermined time, outer cylindrical casings (21) having a plurality of steam-discharging holes (23) formed in outer circumferential surface, inner cylindrical casings (25) installed within the outer cylindrical casings (21) while supported therein, and heating members (27) fixedly installed within the inner cylindrical casings (25); steam-supplying tubes (30) connecting one end portions of the steam generators and the each hair curling rod (20), thereby providing the steam into a space between the outer and inner cylindrical casings (21, 25); and power lines (40) connecting the other end portion of the each hair rods (20) and a power supply (not shown in the figure), thereby providing power to the heating members

(27), wherein damage to the hair due to heat from the hair curling rods (20) can be prevented by intermittently supplying the steam to the hair curling rods (20) heated by the heating members (27), and at the same time, the hair can be resilient and at the same time desired hair setting can be completely achieved since supplying of the steam to the hair and drying of the hair by the heat from the hair curling rods (20) are implemented alternatively.

[0006] Furthermore, Patent Laid-Open Publication No. 2007-0013806 discloses a perming device using steam. As illustrated in Fig. 7, this perming device comprises a perming rod (430) for perming the hair while contacting with the hair; a body constructed so as to generate hot steam; a steam inlet tube (420) for supplying the hot steam generated in the body to the perming rod (430); a steam outlet tube (440) for returning the steam, whose temperature has been lowered by heat transfer to the perming rod (430), to the body (100), wherein the perming rod (430) has a steam through-passage formed therein, and the steam inlet tube (420) and the steam outlet tube (440) are coupled to both end portions of the steam through-passage, respectively. The hot steam supplied from the steam inlet tube (420) heats the perming rod (430) while flowing through the steam through-passage, and the steam, whose temperature has been lowered by heating the perming rod (430), is returned to the body through the steam outlet tube (440).

[0007] Furthermore, Patent Laid-Open Publication No. 2002-0035182 discloses a perming rod having a steam-supplying function. As illustrated in Fig. 8, this perming rod comprises a rod of a predetermined length with a cylindrical small-diameter part (11) having a plurality of steam holes (11a) penetrating inner and outer circumferential surfaces and large-diameter part (12) formed by enlarging both end portions of the small-diameter portion; a heating body (14) inserted by a predetermined portion of its length into one side of the rod and connected to power line and generating the heat when electric current flows; and a water box (15) having a storage space for storing a predetermined amount of water and a wick (16) for discharging the water filled in the storage space toward outlet side of the storage space and a coupling/separating means insertively and removably fastened to the other side of the rod therefor, wherein the water can be evaporated by facing the wick (16) with the heating body (14), and the steam is generated by heating the wick (16) by means of the heat from the heating body (14), and this steam is emitted through the steam holes (11a) formed in the rod, thereby supplying the hair with moisture.

[0008] Meanwhile, in the above-mentioned prior arts, in order to supply the hair with the moisture so that the hair can be prevented from being excessively dry in perming operation and thus damaged, a moisture hose extends through a central portion of the hair curling rod, injects and supplies the moisture at the central portion, or the water box for supplying the moisture is attached

on one side of the hair curling rod and injects the moisture from the rod. Such prior hair curling rods for moisture permanent wave have problems that in perming operation a person getting his or her hair permed is easily tired due to the weight of the water box or steam hose and muscle becomes abnormal due to the weight in perming.

DISCLOSURE OF THE INVENTION

PROBLEM TO BE SOLVED BY THE INVENTION

[0009] The present invention has been devised to solve the problems of the prior arts as described above, and its object is to provide a new structure of hair curling rod for permanent wave with water supply which can supply the hair being permed with a hair nourishing agent, including the moisture, while making the person getting his or her hair permed less tired.

MEANS FOR SOLVING THE PROBLEM

[0010] In order to achieve the above-mentioned object, the present invention provides a hair curling rod for permanent wave which comprises a heater rod with terminals to which a power cord is detachably connected; an outer perforated tube having an accommodation space formed therewithin for inserting the heater rod, and handles formed at left and right end portions of the outer perforated tube; and an absorptive element made from non-woven material or cotton for absorbing moisture or hair nourishing agent and inserted in the accommodation space of the outer perforated tube while being detachably inserted between the heater rod and outer perforated tube, and the heater rod is detachably engage with one side of the outer perforated tube in an interlocking manner.

[0011] In the present invention, retainers made of heat resistance silicone are fitted on both left and right end portions of the absorptive element for preventing a shape of non-woven material or cotton constituting the absorptive element from being disheveled, thereby making it easy to insert the absorptive element into the perforated tube and at the same time preventing the shape from being disordered when the absorptive element is washed.

[0012] In a preferred example of the present invention, an inner perforated tube may enclose the heater rod, and this inner perforated tube serves to prevent the heater rod from contacting directly with the absorptive element and also protect the heater rod and absorptive element from each other. It is possible to use the inner tube with no perforated holes.

[0013] Furthermore, as material for the inner perforated tube, in addition to metal such as aluminium having good heat conductance, it is also possible to use a variety of functional material containing other component emitting far-infrared radiation or nano silver component,

ADVANTAGEOUS EFFECTS

[0014] The present invention has advantageous effects that since it can effectively supply the hair with the moisture and hair nourishing agent in perming operation, damage to the hair by perming can be minimized and at the same time high-temperature heat generated from the heater installed detachably within the hair curling rod is transferred to the hair through the moisture and then finishes the hair in a desired shape of permanent wave and neutralize the finished hair in the shape of permanent wave to maintain the shape for a long time, and also moisture perming can be implemented conveniently without causing both the perming person and person getting his or her hair permed to be tired in perming operation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] Fig. 1 is a exploded perspective view illustrating a hair curling rod for permanent wave of the present invention.

[0016] Fig. 2 is a sectional view illustrating a engaged state of the hair curling rod for permanent wave of the present invention.

[0017] Fig. 3 is a sectional view of Fig. 2 taken along line A-A.

[0018] Fig. 4 is a perspective view illustrating a use state of the present invention.

[0019] Fig. 5 is a sectional view of Fig. 4 taken along line B - B.

[0020] Fig. 6 is an example of a hair curling rod for permanent wave of prior art.

[0021] Fig. 7 is another example of a hair curling rod for permanent wave of prior art.

[0022] Fig. 8 is yet another example of a hair curling rod for permanent wave of prior art.

LISTS OF REFERNECE NUMERALS IN THE DRAWINGS

[0023]

- 1: terminal 2: heater rod
- 2a: flange part 2b: engaging projection
- 3: inner perforated tube 4: accommodation space
- 5: handle 5a: through hole
- 5b: engaging groove 6: outer perforated tube
- 7: absorptive element 7a: retainer
- 8: nipper h: hole
- H: hair

BEST MODES FOR CARRYING OUT THE INVENTION

[0024] Hereinbelow, a non-limitive preferred example of the present invention will be described in detail with reference to the attached drawings.

[0025] Fig. 1 and Fig. 2 are perspective and sectional views illustrating separated state and engaged state of

the hair curling rod for permanent wave with water supply of the present invention, respectively, and Fig. 3 is a sectional view of Fig. 2 taken along line A-A.

[0026] As illustrated in Fig. 1 - 3, the hair curling rod of the present invention comprises a heater rod (2) with plus (+) /minus (-) terminals (1) to which a power cord (not shown in the drawings) is detachably connected; an inner perforated tube (3) enclosing the heater rod (2); an outer perforated tube (6) having an accommodation space (4) formed therewithin for inserting the heater rod (2) and inner perforated tube (3), and handles (5) formed at left and right end portions of the outer perforated tube; and an absorptive element (7) made from non-woven material or cotton for absorbing moisture or hair nourishing agent and inserted in the accommodation space (4) of the outer perforated tube (6) while being detachably inserted between the inner perforated tube (3) and outer perforated tube (6).

[0027] In the present invention, the heater rod (2) is configured in such a way that it can detachably engage with one side of the outer perforated tube (6) in an interlocking manner, wherein a flange part (2a) is formed at one side of the heater rod (2), and engaging projections (2b) are formed on peripheral portion of the flange part (2a), and a through hole (5a) is formed inside the handle (5) on one side of the outer perforated tube (6), and an engaging groove (5b) is formed outside the through hole (5a) at a position corresponding to the engaging projections (2b) formed on the peripheral portion of the flange part (2a) of the heater rod (2), and if the heater rod (2) is rotated in one direction while being inserted in the outer perforated tube (6) after the flange part (2a) of the heater rod (2) is inserted in the engaging groove (5b), the engaging projections (2b) of the heater rod (2) are caught inside the through hole (5a), thereby being prevented from being removed. When the heater rod (2) is to be separated, the heater rod (2) is rotated in a direction opposite to the one direction, and thus the engaging projections (2b) caught inside the through hole (5a) can be removed outward through the engaging groove (5b), whereby the heater rod can be separated from the outer perforated tube.

[0028] The present invention is not limited to the above-mentioned engaging method, and any other method can be also used for engaging the heater rod and outer perforated tube.

[0029] As illustrated in the attached drawings, in the present invention, retainers (7a) made of heat resistance silicone are fitted on both end portion of the absorptive element (7) for preventing a shape of non-woven material or cotton constituting the absorptive element (7) from being disheveled, and these retainers (7a) are used in order to easily maintain a circular shape of the element (7) when it is inserted or removed from between the inner perforated tube (3) and outer perforated tube (6), in addition to serving to prevent the element (7) itself from being disheveled.

[0030] Since the absorptive element (7) consists of

non-woven material or cotton wool or cotton and the like, if the element is heated in perming operation by power being applied to the heater rod (2) installed within the hair curling rod, while absorbing water or liquid hair nourishing agent, the water and hair nourishing agent are evaporated and then radially discharged outward through the holes (h) perforated on the outer perforated tube (6), whereby the water and hair nourishing agent can be properly supplied to the hair wrapped on the hair curling rod.

[0031] Meanwhile, if the absorptive element (7) is contaminated after used in perming operation, it is washed with water, then dried and thereafter can be re-used, and for maintaining a durability of the absorptive element it is preferable to put thin sheath made from cotton or silk and the like on the element.

[0032] Fig. 4 illustrates a state where the hair is wrapped on the hair curling rod of the present invention and fixed with nipper, and Fig. 5 is a sectional view of Fig. 4 taken along line B - B. In perming operation, perm lotion is applied to the hair (H) by using a comb (not shown in the drawings) etc., and thereafter the hair with the perm lotion applied thereto is wrapped on the hair curling rod of the present invention, and the nipper (8) is clamped on the rod with the hair wrapped thereon to prevent the wrapped state of the hair from being disheveled, and the power cord (not shown in the drawings) is then connected to the heater rod (2) inserted within the hair curling rod to heat the heater rod (2). At this time, if the absorptive element (7) accommodated within the hair curling rod is wet with the water or liquid hair nourishing agent, the water or liquid hair nourishing agent absorbed in the element (7) is evaporated by the heat from the heater rod (2) and then radially discharged outward through the holes (h) perforated on the outer perforated tube (6), whereby the permanent wave is achieved while the moisture and hair nourishing agent are properly supplied to the hair (H) wrapped on the hair curling rod.

INDUSTRIAL APPLICABILITY

[0033] The hair curling rod for permanent wave of the present invention is lighter in weight compared to the existing steam-supplying-type or water box-type hair curling rod, so the permed person does not feel so heavy in using of the hair curling rod and therefore is less tired. Furthermore, the hair curling rod is simple in its structure and therefore easy to produce, and after use of the hair curling rod the heater rod and absorptive element can be simply separated, washed and then kept and thereafter can be re-used, whereby sanitary and safe perming can be implemented, so the hair curling rod of the present invention can be usefully utilized in place of the existing hair curling rod.

Claims

1. A hair curling rod for permanent wave, **characterized in that** it comprises a heater rod (2) with terminals (1) to which a power cord is detachably connected; an outer perforated tube (6) having an accommodation space (4) formed therewithin for inserting the heater rod (2), and handles (5) formed at both left and right end portions of the outer perforated tube; and an absorptive element (7) made from non-woven material or cotton for absorbing moisture or liquid hair nourishing agent and inserted in the accommodation space (4) of the outer perforated tube (6) while being detachably inserted between the heater rod (2) and outer perforated tube (6), and the heater rod (2) is detachably engage with one side of the outer perforated tube (6) in an interlocking manner.
2. The hair curling rod for permanent wave according to claim 1, **characterized in that** retainers (7a) made of metal or resin material are fitted on both left and right end portions of the absorptive element (7) for preventing a shape of non-woven material or cotton constituting the absorptive element from being disheveled.
3. The hair curling rod for permanent wave according to claim 1, **characterized in that** a flange part (2a) is formed at one side of the heater rod (2), and engaging projections (2b) are formed on peripheral portion of the flange part (2a), and a through hole (5a) is formed inside the handle (5) on one side of the outer perforated tube (6), and an engaging groove (5b) is formed outside the through hole (5a) at a position corresponding to the engaging projections (2b) formed on the peripheral portion of the flange part (2a) of the heater rod (2).

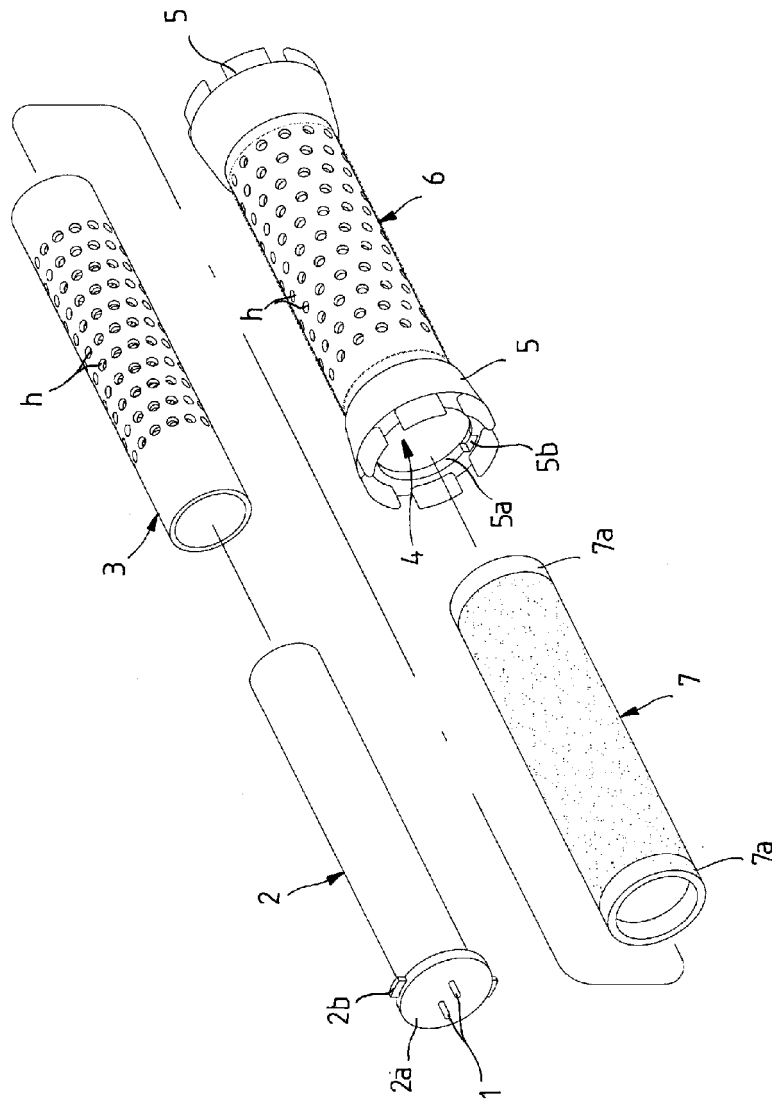
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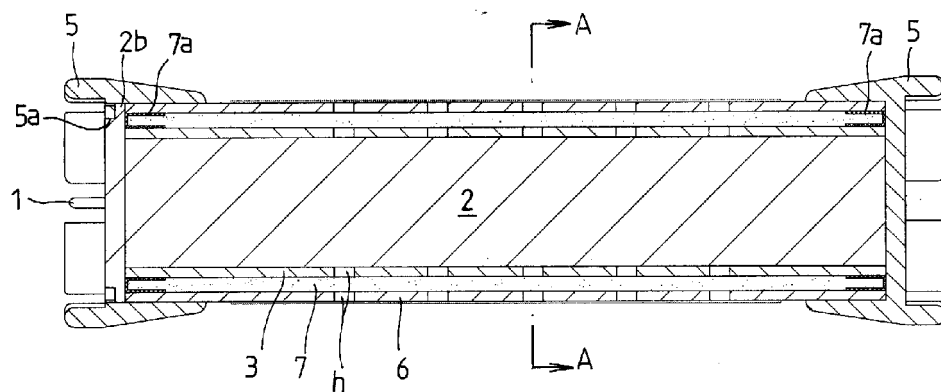
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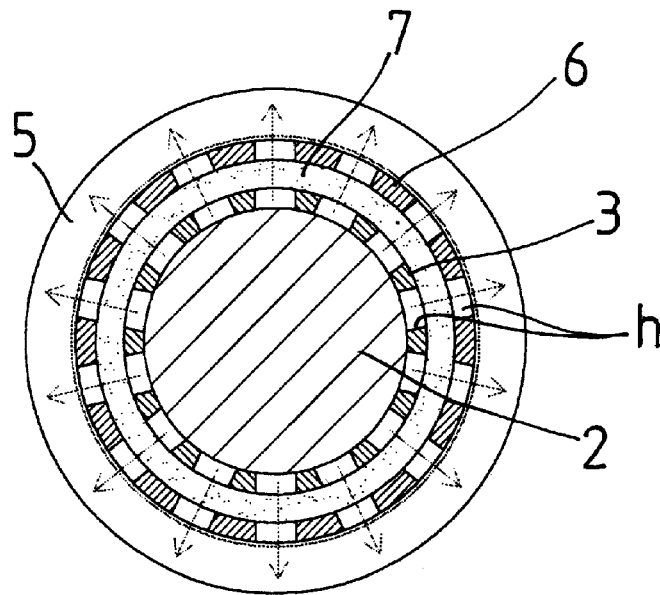
[Fig. 1]



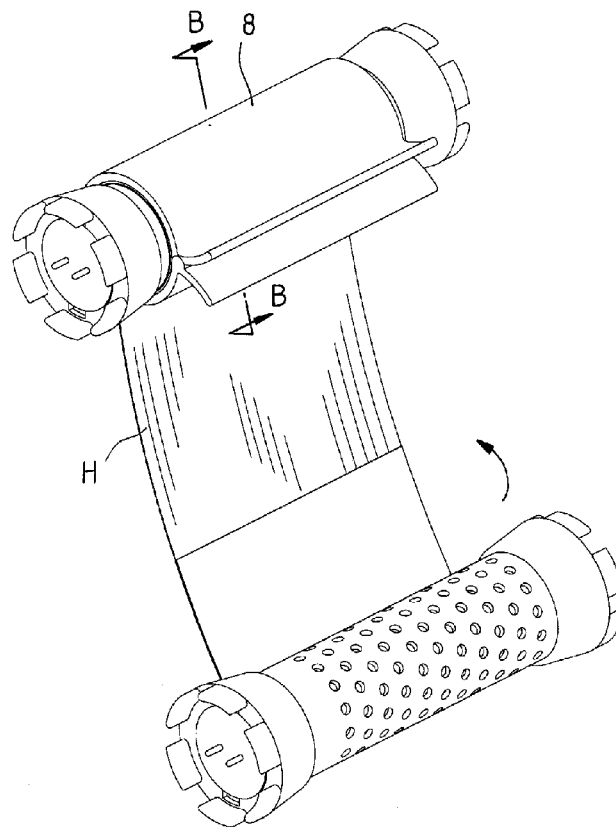
[Fig. 2]



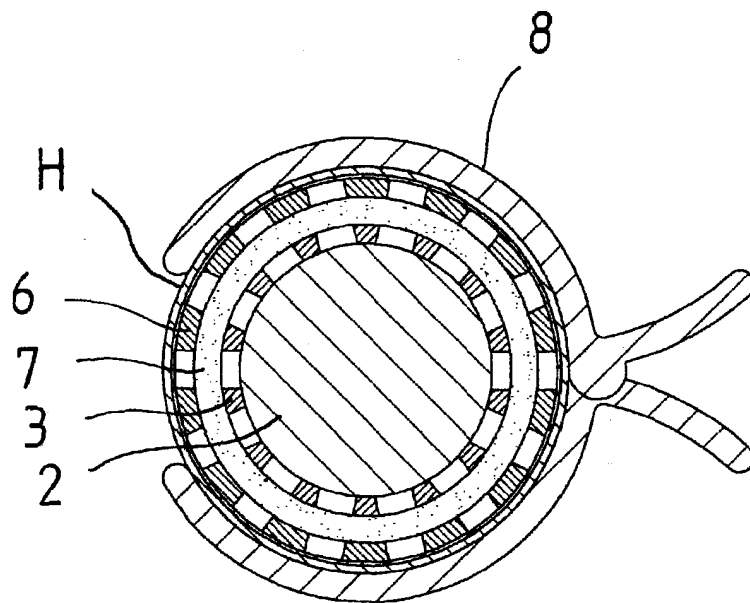
[Fig. 3]



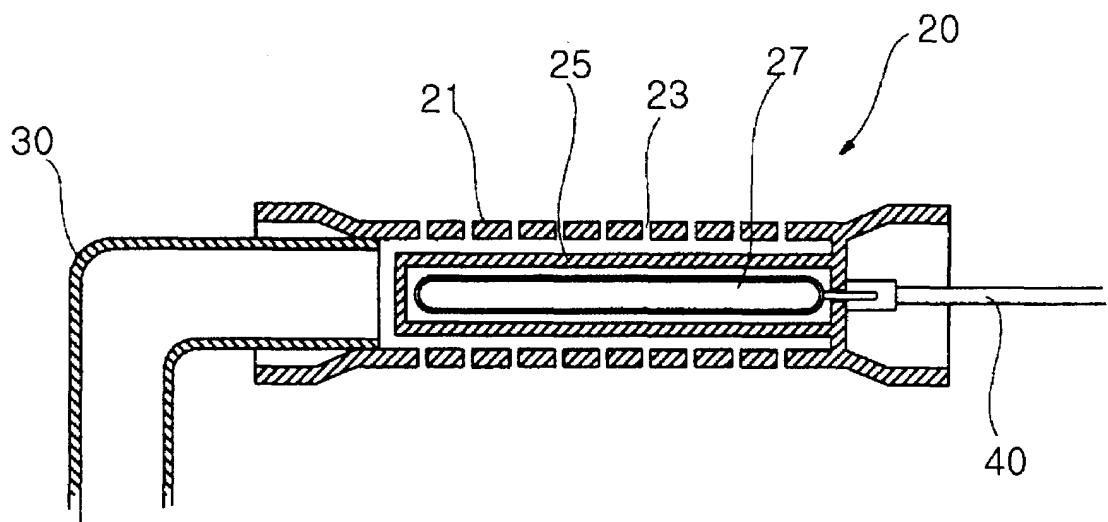
[Fig. 4]



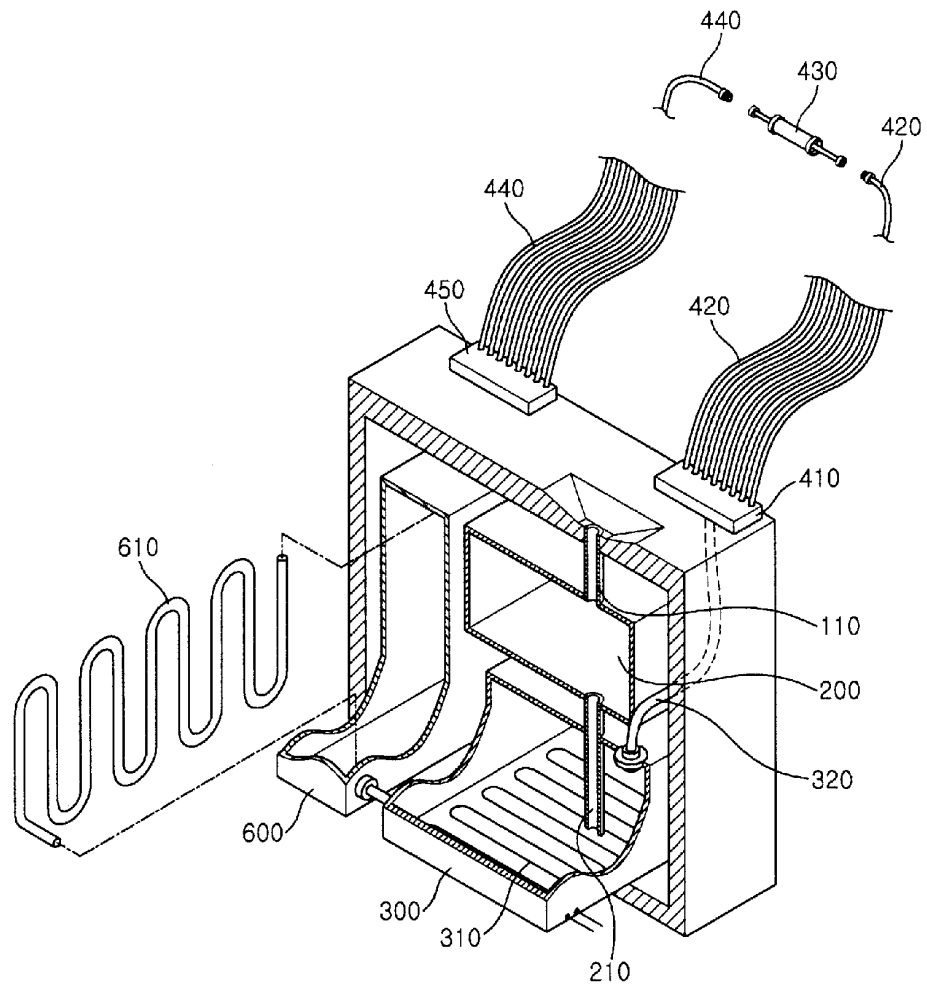
[Fig. 5]



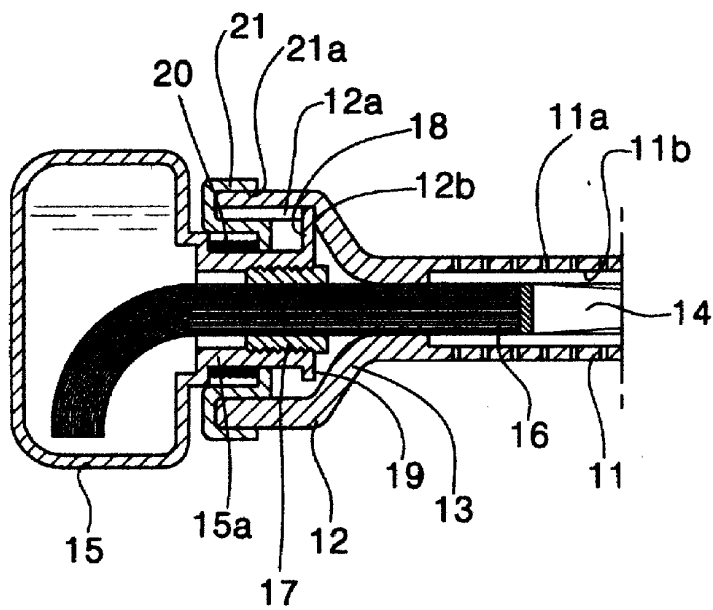
[Fig. 6]



[Fig. 7]



[Fig. 8]



REFERENCES CITED IN THE DESCRIPTION

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