US 20200093385A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2020/0093385 A1**

Felker (43) **Pub. Date: Mar. 26, 2020**

(54) **HEATED BLOOD PRESSURE CUFF ASSEMBLY**

(71) Applicant: **Angela Felker**, Cumming, GA (US)

(72) Inventor: **Angela Felker**, Cumming, GA (US)

(21) Appl. No.: **16/136,332**

(22) Filed: **Sep. 20, 2018**

Publication Classification

(51) **Int. Cl.**

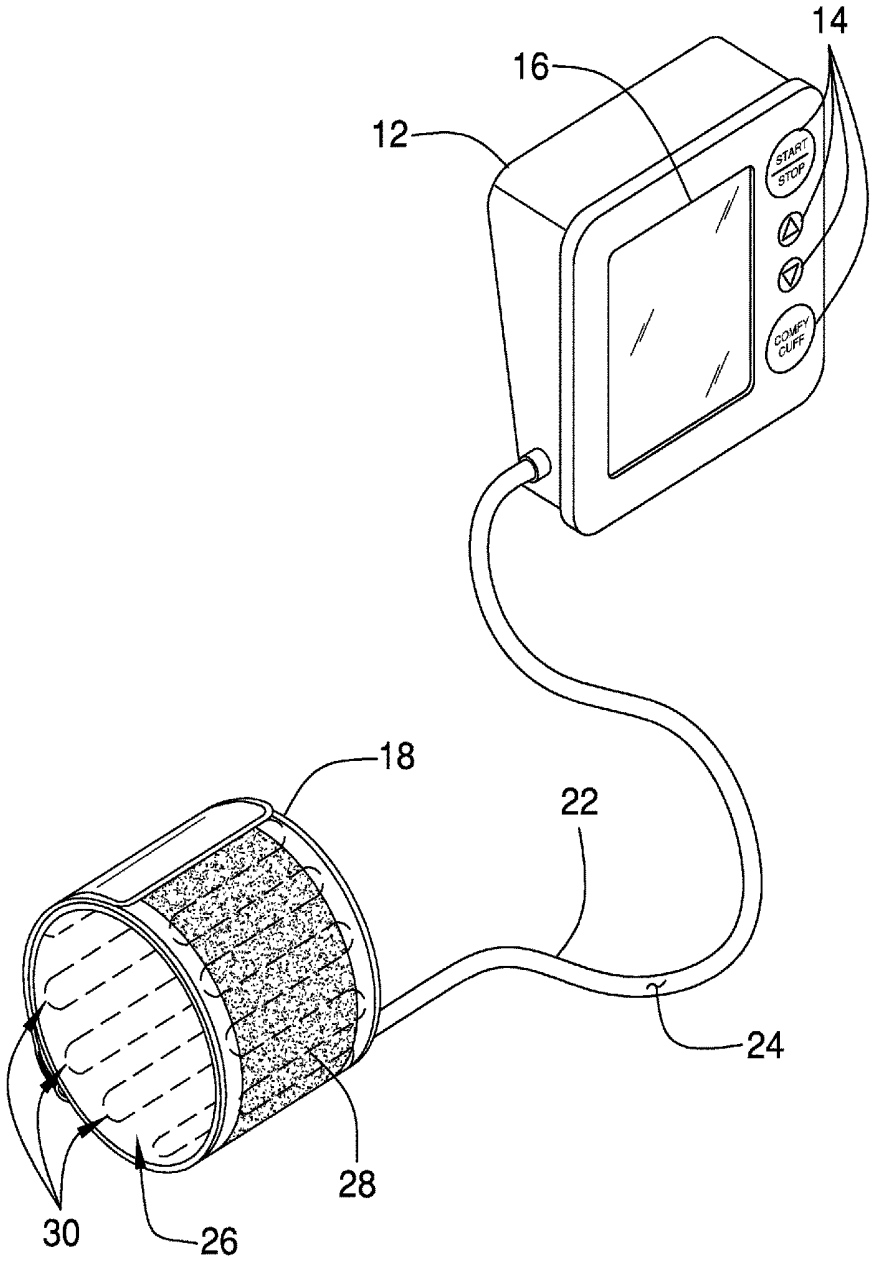
A61B 5/022	(2006.01)
A61B 5/00	(2006.01)
A61F 7/02	(2006.01)

(52) **U.S. Cl.**

CPC ***A61B 5/02233*** (2013.01); ***A61B 5/742*** (2013.01); *A61F 2007/0282* (2013.01); *A61B 2562/225* (2013.01); *A61F 2007/0228* (2013.01); ***A61F 7/02*** (2013.01)

(57) **ABSTRACT**

A heated blood pressure cuff assembly for warming a blood pressure cuff includes an electronic blood pressure monitor that has a plurality of controls and a display. A blood pressure cuff is provided and is in fluid communication with the electronic blood pressure monitor for checking blood pressure in a patient. A heating unit is coupled to the blood pressure cuff and the heating unit is in thermal communication with the blood pressure cuff. The heating unit warms the blood pressure cuff when the heating unit is turned on thereby inhibiting a physiological response to cold in the patient when the blood pressure cuff is applied.



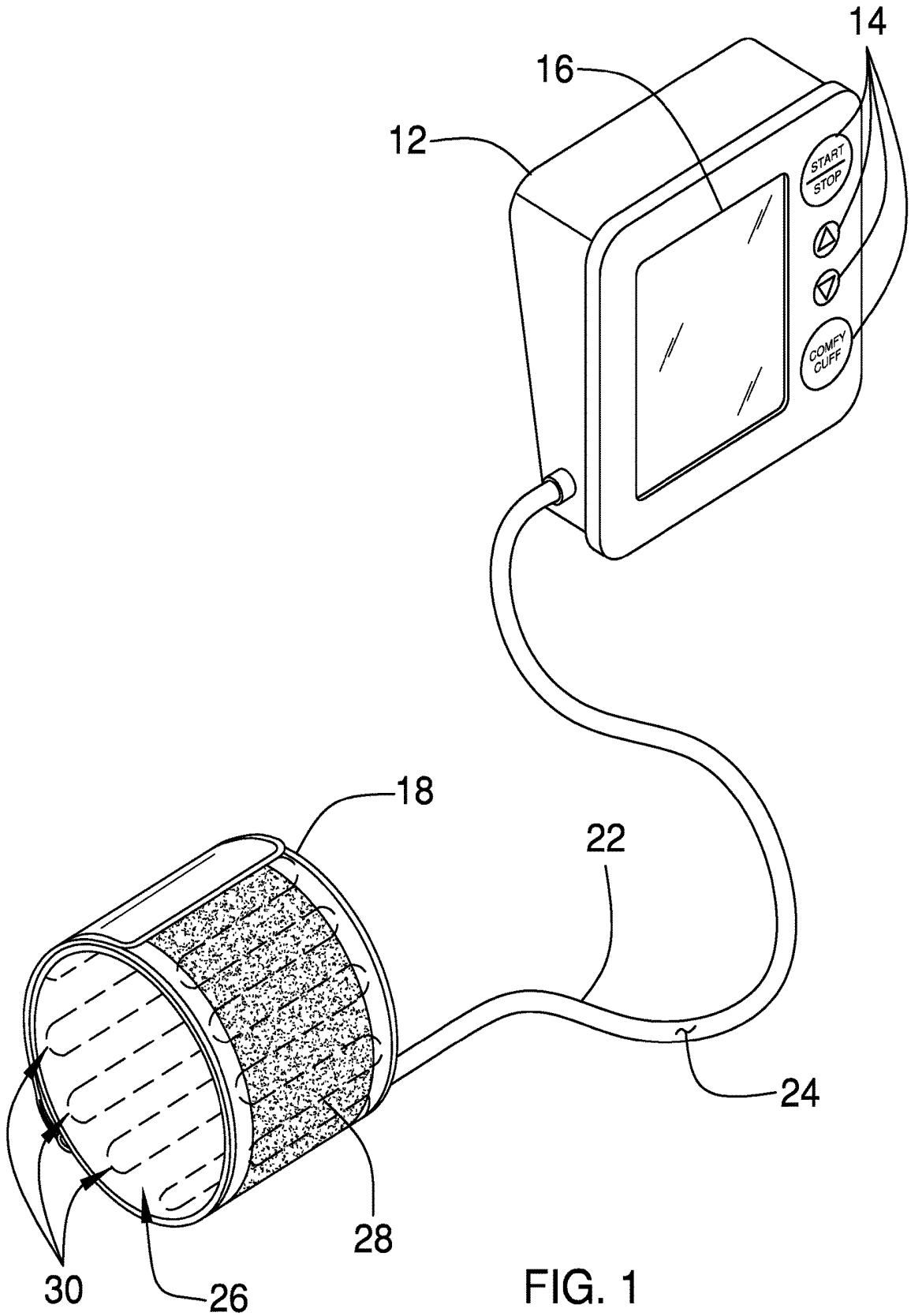


FIG. 1

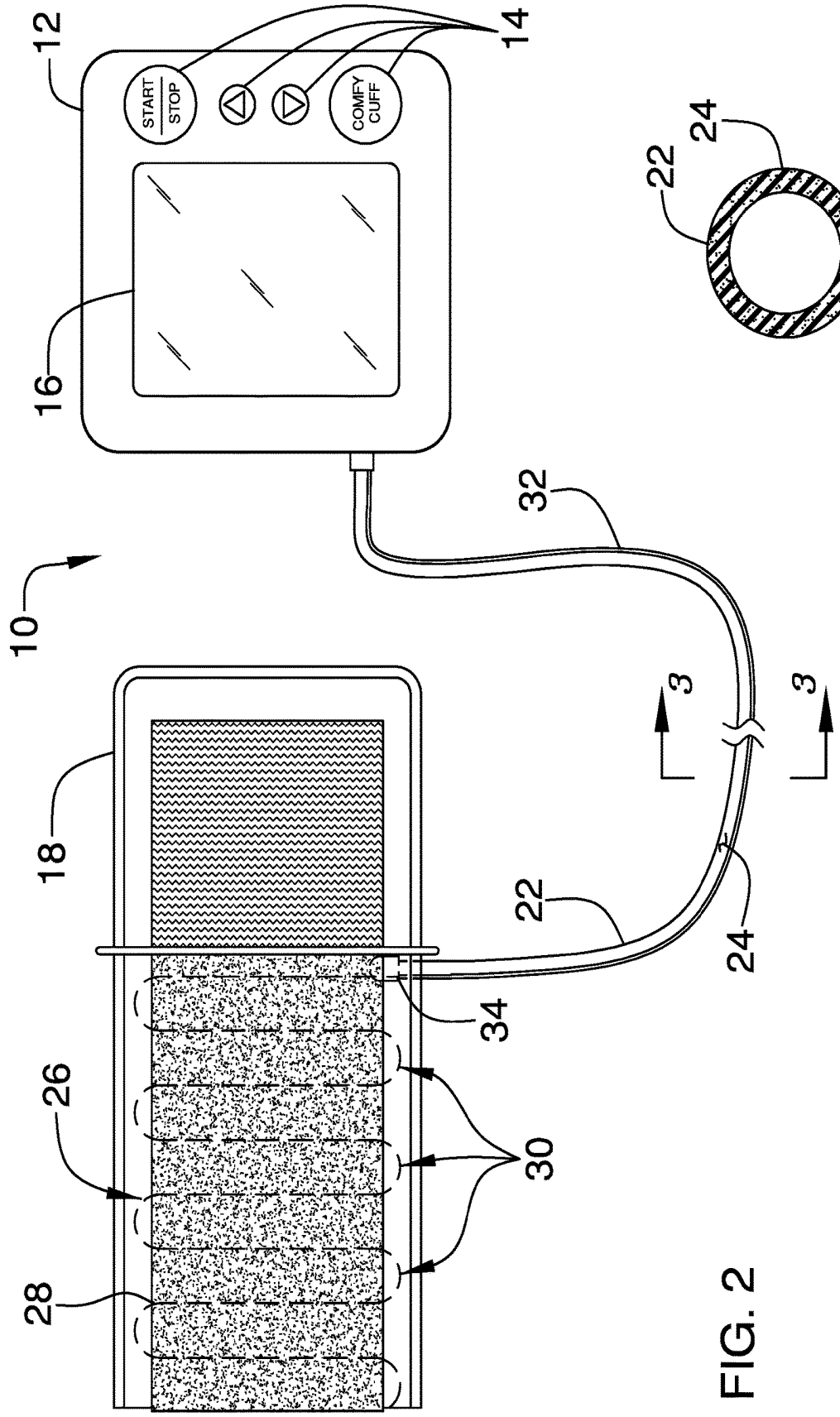

12
14
START
STOP
COMFY
CUFF
16
10
32
18
22
24
34
26
30
28
3
3

FIG. 2

22
24
34
32

FIG. 3

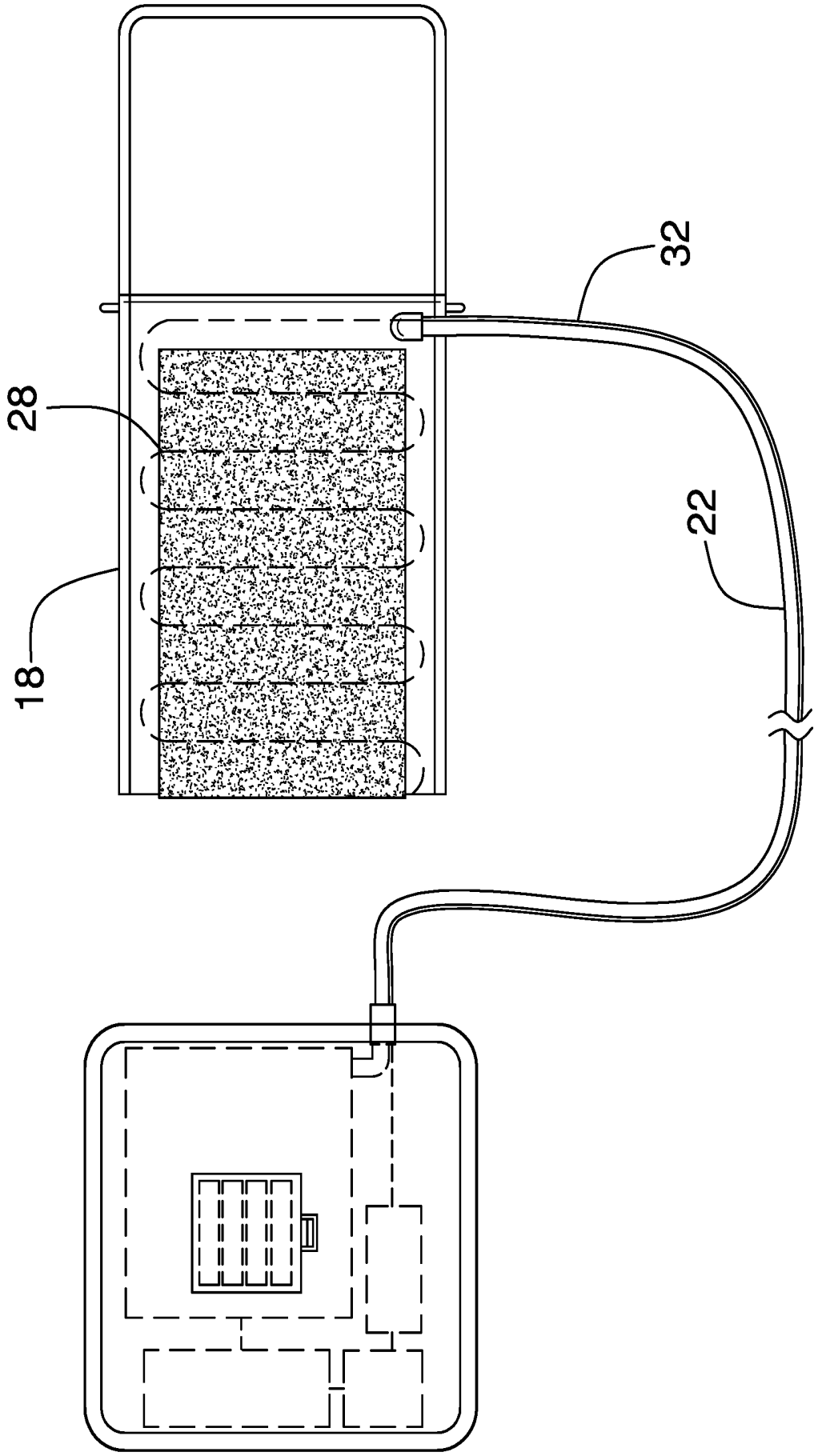


FIG. 4

HEATED BLOOD PRESSURE CUFF ASSEMBLY

CROSS-REFERENCE TO RELATED APPLICATIONS [text missing or illegible when filed]

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0001] Not Applicable

THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

[0002] Not Applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC OR AS A TEXT FILE VIA THE OFFICE ELECTRONIC FILING SYSTEM.

[0003] Not Applicable

STATEMENT REGARDING PRIOR DISCLOSURES BY THE INVENTOR OR JOINT INVENTOR

[0004] Not Applicable

BACKGROUND OF THE INVENTION

(1) Field of the Invention [text missing or illegible when filed]

(2) Description of Related Art Including Information Disclosed Under 37 CFR 1.97 and 1.98

[0005] The disclosure and prior art relates to heated cuff assemblies and more particularly pertains to a new heated cuff assembly for warming a blood pressure cuff.

BRIEF SUMMARY OF THE INVENTION

[0006] An embodiment of the disclosure meets the needs presented above by generally comprising an electronic blood pressure monitor that has a plurality of controls and a display. A blood pressure cuff is provided and is in fluid communication with the electronic blood pressure monitor for checking blood pressure in a patient. A heating unit is coupled to the blood pressure cuff and the heating unit is in thermal communication with the blood pressure cuff. The heating unit warms the blood pressure cuff when the heating unit is turned on thereby inhibiting a physiological response to cold in the patient when the blood pressure cuff is applied.

[0007] There has thus been outlined, rather broadly, the more important features of the disclosure in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the disclosure that will be described hereinafter and which will form the subject matter of the claims appended hereto.

[0008] The objects of the disclosure, along with the various features of novelty which characterize the disclosure, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWING(S)

[0009] The disclosure will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

[0010] FIG. **1** is a perspective view of a heated blood pressure cuff assembly according to an embodiment of the disclosure.

[0011] FIG. **2** is a front perspective view of an embodiment of the disclosure.

[0012] FIG. **3** is a cross sectional view taken along line **3-3** of FIG. **2** of an embodiment of the disclosure.

[0013] FIG. **4** is a back phantom view of an embodiment of the disclosure.

DETAILED DESCRIPTION OF THE INVENTION

[0014] With reference now to the drawings, and in particular to FIGS. **1** through **4** thereof, a new heated cuff assembly embodying the principles and concepts of an embodiment of the disclosure and generally designated by the reference numeral **10** will be described.

[0015] As best illustrated in FIGS. **1** through **4**, the heated blood pressure cuff assembly **10** generally comprises an electronic blood pressure monitor **12** that has a plurality of controls **14** and a display **16**. The electronic blood pressure monitor **12** may be employed in a clinical setting, such as a hospital or a clinic. A blood pressure cuff **18** is included and the blood pressure cuff **18** is in fluid communication with the electronic blood pressure monitor **12** for checking blood pressure in a patient. The blood pressure cuff **18** includes a hose **22** that is fluidly coupled between the blood pressure cuff **18** and the electronic blood pressure monitor **12**. The hose **22** has an outer surface **24** and the blood pressure cuff **18** may be of any conventional design commonly employed by health care professionals.

[0016] A heating unit **26** is provided and the heating unit **26** is coupled to the blood pressure cuff **18**. The heating unit **26** is in thermal communication with the blood pressure cuff **18** such that the heating unit **26** warms the blood pressure cuff **18** when the heating unit **26** is turned on. Thus, the heating unit **26** inhibits a physiological response to cold in the patient when the blood pressure cuff **18** is applied. In this way the heating unit **26** ensures a more accurate blood pressure reading by avoiding increased heart rate, drop in blood pressure and other physiological responses to a cold touch.

[0017] The heating unit **26** comprises a heating element **28** that is positioned within the blood pressure cuff **18** and the heating element **28** is in thermal communication with the blood pressure cuff **18**. The heating element **28** may be arranged to form a plurality of coils **30** within the blood pressure cuff **18**. Additionally, the heating element **28** may be an electric heating element **28** with an operational temperature ranging between approximately 80.0 degrees Fahrenheit and 90.0 degrees Fahrenheit.

[0018] A tube **32** is coupled to the outer surface **24** of the hose **22** and the tube **32** is coextensive with the hose **22**. A conductor **34** is positioned within the tube **32** and the conductor **34** is electrically coupled between the heating element **28** and the electronic blood pressure monitor **12**.

Thus, the heating element **28** is in electrical communication with the controls **14** on the electronic blood pressure monitor **12** for controlling operational parameters of the heating element **28**. The controls **14** on the electronic blood pressure monitor **12** may include a power button for the heating element **28**, a temperature increase button and a temperature decrease button, and the power button may have "comfy cuff" printed thereon.

[0019] In use, the heating element **28** is turned on prior to applying the blood pressure cuff **18** to the patient. Thus, the heating element **28** warms the blood pressure cuff **18** to a temperature that is near the body temperature of the patient. In this way the patient does not display any of the physiological responses to a cold touch, thereby enhancing accuracy of the blood pressure reading. Additionally, the heating element **28** serves to enhance comfort for the patient while the blood pressure is being checked.

[0020] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of an embodiment enabled by the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by an embodiment of the disclosure.

[0021] Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the disclosure. In this patent document, the word "comprising" is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article "a" does not exclude the possibility that more than one of the element is present, unless the context clearly requires that there be only one of the elements.

I claim:

1. A heated blood pressure cuff assembly being selectively heated wherein said assembly is configured to inhibit a cold shock reaction in a patient, said assembly comprising:

an electronic blood pressure monitor having a plurality of controls and a display;

a blood pressure cuff being in fluid communication with said electronic blood pressure monitor for checking blood pressure in a patient; and

a heating unit being coupled to said blood pressure cuff, said heating unit being in thermal communication with said blood pressure cuff such that said heating unit warms said blood pressure cuff thereby inhibiting a physiological response to cold in the patient when said blood pressure cuff is applied.

2. The assembly according to claim **1**, wherein said heating unit comprises a heating element being positioned within said blood pressure cuff, said heating element being in thermal communication with said blood pressure cuff.

3. The assembly according to claim **1**, wherein:

said blood pressure cuff includes a hose having an outer surface; and

said heating unit includes a tube being coupled to said outer surface of said hose, said tube being coextensive with said hose.

4. The assembly according to claim **3**, wherein said heating unit includes:

a heating element; and

a conductor being electrically coupled between said heating element and said electronic blood pressure monitor, said heating element being in electrical communication with said controls on said electronic blood pressure monitor for controlling operational parameters of said heating element.

5. A heated blood pressure cuff assembly being selectively heated wherein said assembly is configured to inhibit a cold shock reaction in a patient, said assembly comprising:

an electronic blood pressure monitor having a plurality of controls and a display;

a blood pressure cuff being in fluid communication with said electronic blood pressure monitor for checking blood pressure in a patient, said blood pressure cuff including a hose being fluidly coupled between said blood pressure cuff and said electronic blood pressure monitor, said hose having an outer surface; and

a heating unit being coupled to said blood pressure cuff, said heating unit being in thermal communication with said blood pressure cuff such that said heating unit warms said blood pressure cuff thereby inhibiting a physiological response to cold in the patient when said blood pressure cuff is applied, said heating unit comprising:

a heating element being positioned within said blood pressure cuff, said heating element being in thermal communication with said blood pressure cuff;

a tube being coupled to said outer surface of said hose, said tube being coextensive with said hose; and

a conductor being positioned within said tube, said conductor being electrically coupled between said heating element and said electronic blood pressure monitor, said heating element being in electrical communication with said controls on said electronic blood pressure monitor for controlling operational parameters of said heating element.

* * * * *

专利名称(译)	血压袖套总成		
公开(公告)号	US20200093385A1	公开(公告)日	2020-03-26
申请号	US16/136332	申请日	2018-09-20
发明人	FELKER, ANGELA		
IPC分类号	A61B5/022 A61B5/00 A61F7/02		
CPC分类号	A61F7/02 A61B2562/225 A61B5/742 A61F2007/0282 A61F2007/0228 A61B5/02233 A61B2090/064 A61F7/007 A61F2007/0031 A61F2007/0086 A61F2007/0091 A61F2007/0093		
外部链接	Espacenet USPTO		

摘要(译)

用于加热血压袖带的加热的血压袖带组件包括具有多个控件和显示器的电子血压计。 提供了一个血压袖带，该血压袖带与电子血压计流体连通，以检查患者的血压。 加热单元连接到血压袖带，并且加热单元与血压袖带热连通。 当加热单元打开时，加热单元加热血压袖带，从而当施加血压袖带时抑制患者对感冒的生理反应。