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(54) **ADJUSTABLE LIQUID-WIPING DEVICE**

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(57) **ABSTRACT**

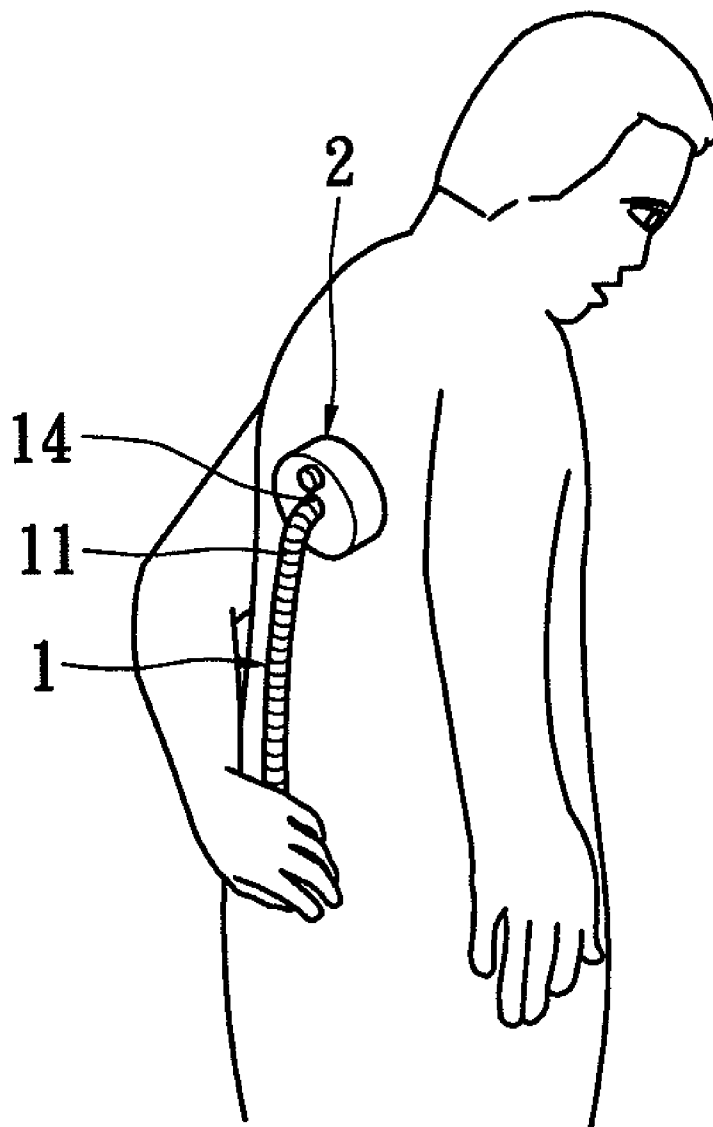
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An adjustable liquid-wiping device includes an adjustable handle and a serving container. The adjustable handle is a shaft which is flexible and telescopic. The serving container, connected to one end of the adjustable handle, forms a liquid-reserving space therein for containing lotion, medical liquid, or other liquid. The serving container is provided with a liquid supplying portion. Whereby, the adjustable liquid-wiping device is very convenient for assisting a user in wiping liquid on any parts of user's body by utilizing the adjusting function.

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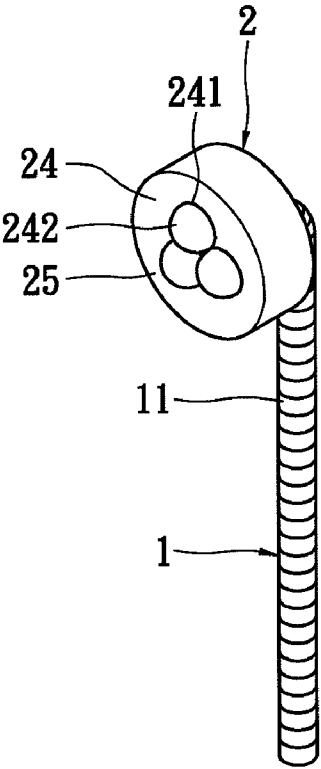


FIG. 1

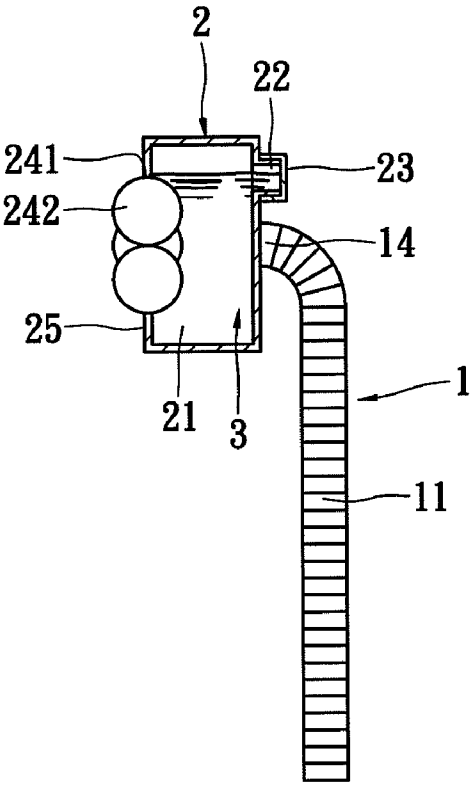


FIG. 2

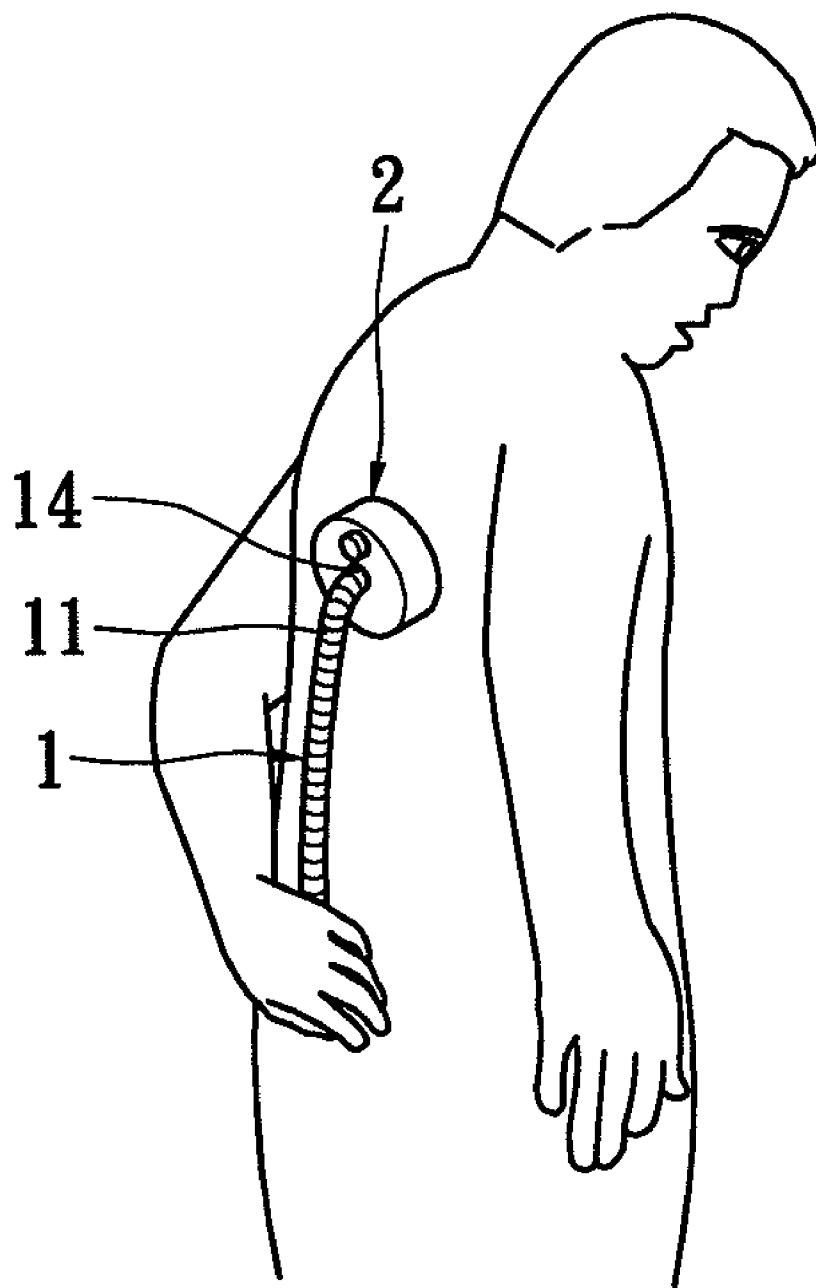


FIG. 3

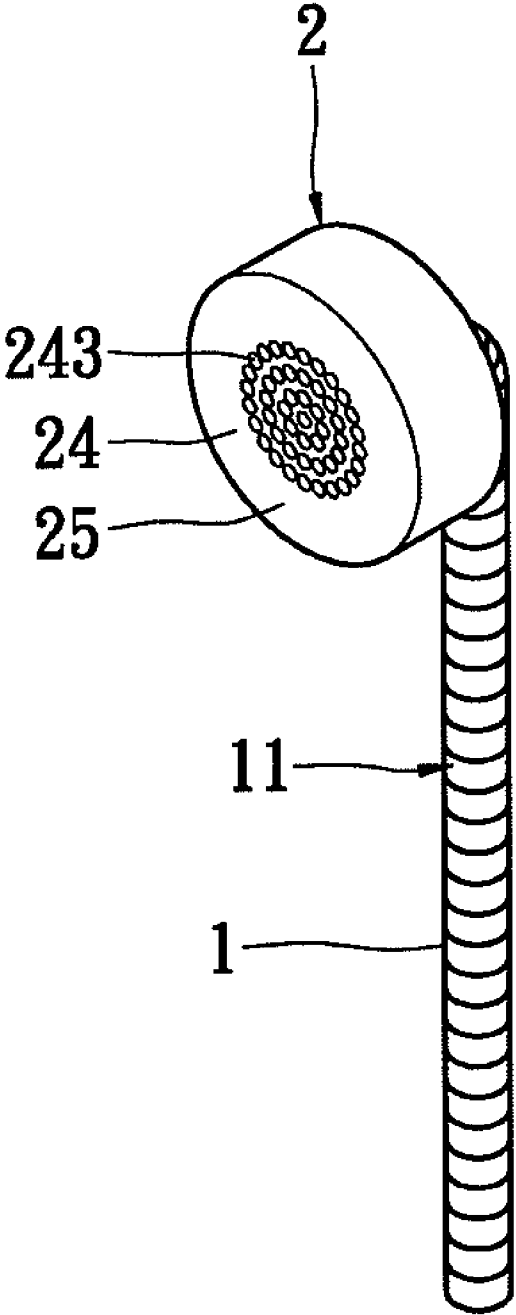


FIG. 4

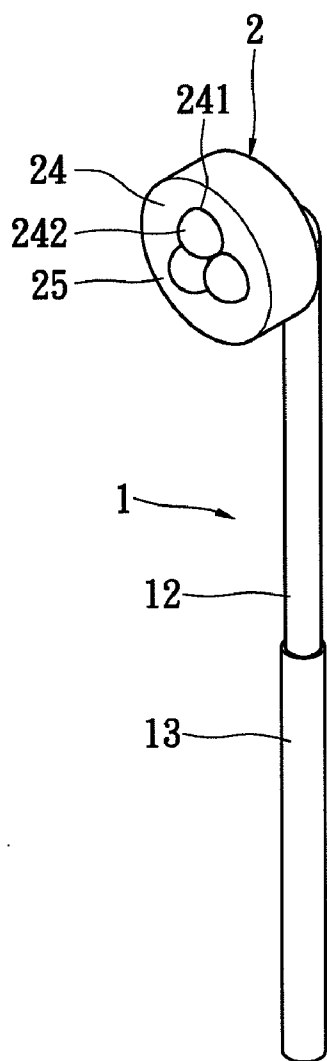


FIG. 5

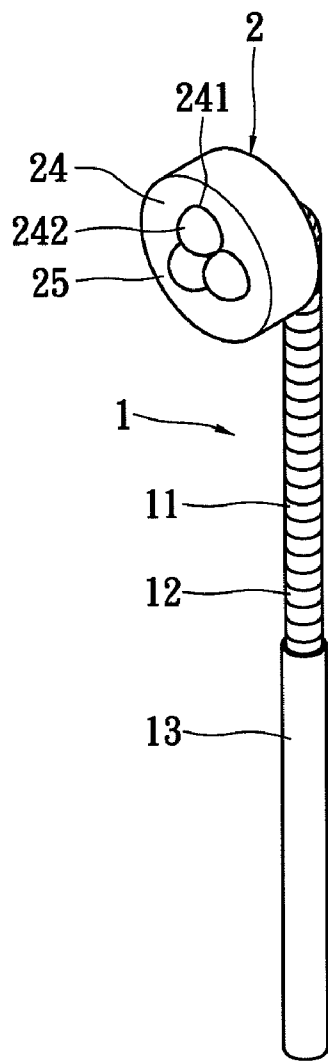


FIG. 6

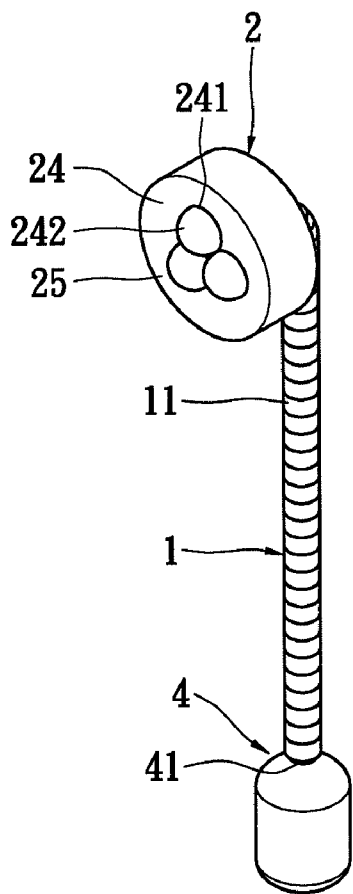


FIG. 7

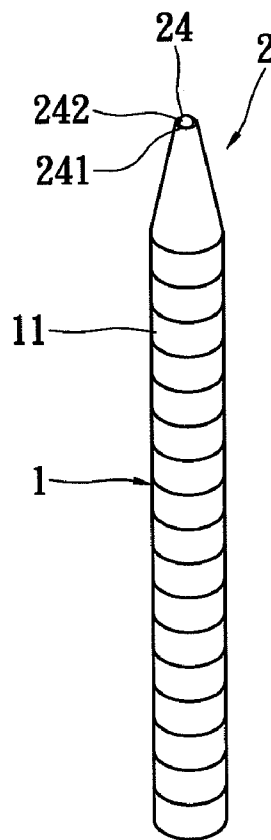


FIG. 8

ADJUSTABLE LIQUID-WIPING DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a liquid-wiping device, and more particular to an adjustable liquid-wiping device which can be adjusted in a curved way or a telescopic way, to assist a user to wipe liquid on any desired positions of a human body.

[0003] 2. Description of Related Art

[0004] Lotion, such as moisturizing lotion, skin-caring lotion, skin-protecting lotion, or suntan lotion, and medical liquid . . . etc. has been widely wiped on different parts of human bodies for the functions of caring, protecting or healing. The conventional way to wipe lotion on the human bodies is usually using a container to place lotion. The container is usually equipped with an opening which allows the lotion to be poured on hands so as to apply the lotion on the human bodies.

[0005] Liquid may be applied to many parts of human bodies. However a backside of the human body is usually hard to apply the liquid on by the user himself. It usually needs other one's assistance to get it done, thereby causing inconvenience in use. Moreover, the lotion in the container poured onto hands causing uncomfortable wet and sticky feeling needs to be further cleaned or wiped off, thereby resulting in inconvenient usage.

[0006] Even though some containers allow the user to directly apply lotion onto human body without pouring out the lotion, the conventional containers are inconvenient for use by the user to apply the lotion on the backside of the human body.

[0007] Consequently, because of the technical limitations of described above, the applicant strives via real world experience and academic research to develop the present invention, which can effectively improve the limitations described above.

SUMMARY OF THE INVENTION

[0008] An object of the present invention is to provide an adjustable liquid-wiping device, which can assist a user to apply liquid to any desired positions of human bodies and has an adjustable function for using conveniently.

[0009] An another objective of the present invention is to provide an adjustable liquid-wiping device, which can wipe liquid on human bodies directly to increase the convenience of usage.

[0010] For achieving the objects described above, the present invention provides an adjustable liquid-wiping device, which includes a stick-like adjustable handle and a serving container. The adjustable handle has a connecting portion, and the serving container is connected with the connecting portion of the adjustable handle. The serving container forms a liquid-reserving space therein. The serving container is provided with a liquid supplying portion.

[0011] The advantages of the present invention are:

[0012] The present invention can assist the user to wipe liquid on any positions of human bodies, and has the adjustable function for using conveniently, especially for the backside of the human body which is not easily to be applied on. The user may utilize the adjustable liquid-wiping device to apply the liquid smoothly without others' assistance.

[0013] Moreover, the present invention can wipe the liquid on the human body directly by the liquid supplying portion of the serving container without pouring the liquid on hands first, so that the hands will not have any uncomfortable feeling of wet and sticky. Additional cleaning or wiping is not required, thereby enhancing the convenience of usage.

[0014] The adjustable handle may be a flexible shaft, and it could be curved properly with respect to requirements. The adjustable handle also may be a telescopic shaft, so that it can be telescopic properly with respect to different requirements.

[0015] The features and technology of the present invention can be further understood by reference to the following detailed description when taken in conjunction with the accompanying drawings, and the accompanying drawings are provided only for reference and illustration and not for limiting the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 is a perspective view of an adjustable liquid-wiping device according to a first embodiment of the present invention;

[0017] FIG. 2 is a cross-sectional view of the adjustable liquid-wiping device according to the first embodiment of the present invention;

[0018] FIG. 3 is a perspective view of using the adjustable liquid-wiping device by the user according to the first embodiment of the present invention;

[0019] FIG. 4 is a perspective view of an adjustable liquid-wiping device according to a second embodiment of the present invention;

[0020] FIG. 5 is a perspective view of an adjustable liquid-wiping device according to a third embodiment of the present invention;

[0021] FIG. 6 is a perspective view of an adjustable liquid-wiping device according to a fourth embodiment of the present invention;

[0022] FIG. 7 is a perspective view of an adjustable liquid-wiping device according to a fifth embodiment of the present invention; and

[0023] FIG. 8 is a perspective view of an adjustable liquid-wiping device according to a sixth embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0024] Please refer to FIGS. 1 and 2 showing an adjustable liquid-wiping device of the present invention, which includes an adjustable handle 1 and a serving container 2. The adjustable handle 1 is a flexible or telescopic stick-like shaft. The adjustable handle 1 may be a hollow or solid rod, and its material is not limited, such as plastic, metal, or other materials. In an embodiment of the present invention, the adjustable handle 1 is a flexible stick-like shaft 11, which has a curvable structure to allow for bending. The curvable structure in this embodiment is a spiral-shape metallic pipe. The adjustable handle 1 also may be a shaft composed of flexible materials, or a pipe combined with flexible materials externally or internally.

[0025] The serving container 2 connects to one end of the adjustable handle 1. In this embodiment, one end of the adjustable handle 1 is formed with a connecting portion 14, and the serving container 2 is connected with the connecting portion 14 of the adjustable handle 1. The serving container 2

could be integrally connected with or assembled with the connecting portion 14 of the adjustable handle 1. For example, the serving container 2 may be formed as a thread part (not shown), and the connecting portion 14 is formed as a screw part (not shown) corresponding to the thread part. The screw part can be screwed with the thread part for connection. Alternatively, the serving container 2 may be formed as a through hole (not shown), and the connecting portion 14 is formed as a post (not shown) corresponding to the through hole. The post may be wedged in the through hole for connecting. However, the connection way for the serving container 2 and the connecting portion 14 of the adjustable handle 1 is demonstrated for examples, but is not limited thereto. Glue adhering, high frequent wave connection, or other ways may be applied.

[0026] The material of the serving container 2 is not limited, such as plastic, metal or other materials. The serving container 2, which is used to receive liquid 3, is a hollow body and its shape is not limited, such as a spherical shape, a spheroid, a cube, a polygon shape, or other shapes. The serving container 2 forms a liquid-reserving space 21 therein, and the volume of the liquid-reserving space 21 is not limited. The liquid-reserving space 21 may be used to reserve the liquid 3 for applying on human bodies. The liquid 3 may be different lotions, (such as moisturizing lotion, skin-caring lotion, skin-protecting lotion, or suntan lotion), medical liquid or other kinds of liquid. The kinds of the liquid 3 are not limited. The serving container 2 is provided with an inlet opening 22. The position of the inlet opening 22 is not limited, but it cannot impede the usage in principle. In this embodiment, the inlet opening 22 is formed on a rear side of the serving container 2. In other words, the inlet opening 22 is formed on the side to connect with the adjustable handle 1. The liquid 3 can be filled into the liquid-reserving space 21 of the serving container 2 through the inlet opening 22. And, a lid 23 could be used to seal the inlet opening 22 in a detachable way, such as a screwing way.

[0027] The serving container 2 is formed with a liquid supplying portion 24. In this embodiment, the liquid supplying portion 24 is formed on a front side of the serving container 2. The front side of the serving container 2 has a wiping surface 25. The wiping surface 25 is preferably complied with ergonomics design, such as a proper curved surface to comfortably contact skin of human body. The liquid supplying portion 24 is formed on the wiping surface 25 without limitations on the positions of the liquid supplying portion 24 and the wiping surface 25, as long as it can be applied on the human bodies. The liquid supplying portion 24 includes at least one circular-shaped bearing hole 241 and at least one ball 242 pivotally coupled to the bearing hole 241. In this embodiment, the liquid supplying portion 24 includes a plurality of the bearing holes 241 and a plurality of the balls 242 pivotally coupled to the bearing holes 241. The balls 242 may rotate freely in the bearing holes 241 respectively. There is a proper gap formed between the balls 242 and the bearing holes 241.

[0028] The bearing holes 241 pass through one side wall of the serving container 2, and the liquid 3 in the liquid-reserving space 21 can permeate out through the gap between the bearing holes 241 and the balls 242, to be wiped uniformly on any desired positions of the human bodies.

[0029] Please refer to FIG. 3, when the adjustable liquid-wiping device is used, a user can hold the adjustable handle 1 and bend the adjustable handle 1 properly if necessary. The

serving container 2 can turn freely to various angles when it is necessary, and the liquid supplying portion 24 of the serving container 2 is used to wipe on each part of the human body with the liquid 3 therefrom.

[0030] Please refer to FIG. 4, in which another embodiment according to the present inventions is illustrated. The liquid supplying portion 24 of the serving container 2 includes a plurality of small apertures 243 which are spaced at intervals. The small apertures 243 pass through one side wall of the serving container 2, the liquid 3 in the liquid-reserving space 21 is directed through the small apertures 243 and permeated out to be wiped uniformly on any positions of human body. The diameter of the small apertures 243 is not limited, and the flow rate can be controlled by various diameter sizes of the small apertures 243.

[0031] Please refer to FIG. 5, in which a yet another embodiment according to the present inventions is illustrated. The adjustable handle 1 is a telescopic shaft, which includes at least two shafts 12 and 13 which are interconnected by slipping the one shaft 13 over the other one 12. In this embodiment, there are two of the shafts 12 and 13, which have different diameters of hollow shafts. The shaft 13 with a bigger diameter is telescopically displaceable over the shaft 12 with a smaller diameter. The overall length of the adjustable handle 1 is adjustable by controlling the shaft 12 to be telescopically displaceable within the shaft 13. Therefore, the adjustable handle 1 can be adjusted in different length to use conveniently. Alternatively, the telescopic shaft can include three or four shafts (not shown) which are telescopically displaceable with each other to form the multi-sectional adjustable handle 1. After the length of the shafts 12 and 13 is adjusted, it may be remained due to the friction force applied between the shafts 12 and 13. Alternatively, a locking piece can be provided between the shafts 12 and 13 for fixing.

[0032] Please refer to FIG. 6, in which a fourth embodiment according to the present inventions is illustrated. The adjustable handle 1 is a shaft which is flexible and telescopic, which includes the shafts 12 and 13 which are interconnected by slipping the one shaft 13 over the other one 12. The two shafts 12 and 13 are hollow shaft with different diameters and are telescopically adjustable. The adjustable handle 1 could be adjusted in different lengths. Furthermore, the shaft 12 is a flexible shaft, which is equipped with the curvable structure 11, so that it can be bent. The adjustable handle 1 of this embodiment therefore has both bending and telescoping adjustment functions.

[0033] In the above-mentioned embodiments, the liquid 3 is reserved in the liquid-reserving space 21 of the serving container 2, but the invention is not limited by this way of supplying the liquid 3. Please refer to FIG. 7, in which a fifth embodiment according to the present inventions is illustrated. The liquid 3 is contained in a reservoir 4 first. The reservoir 4 is provided with an opening 41. The adjustable handle 1 of this embodiment is a hollow tube, and the serving container 2 is connected to one end of the adjustable handle 1. Thus, the liquid-reserving space 21 of the serving container 2 is interconnected with the interior section of the adjustable handle 1, and the adjustable handle 1 becomes a liquid pipeline. The another end of the adjustable handle 1 is connected with the opening 41 of the reservoir 4 in a screwing or wedging way, and the adjustable liquid-wiping device of the present invention is connected exteriorly with the reservoir 4. Thus, the liquid 3 inside the reservoir 4 can be transfused to the liquid-reserving space 21 of the serving container 2 through the

adjustable handle 1, and is wiped on the human body through the liquid supplying portion 24 of the serving container 2. In this embodiment, the liquid 3 is infused into the serving container 2 from the reservoir 4. However, the serving container 2 can be directly filled with the liquid 3 by other ways, or the liquid 3 can be infused in the serving container 2 through the adjustable handle 1.

[0034] Please refer to FIG. 8, in which a sixth embodiment of the invention is illustrated. In this embodiment, the adjustable liquid-wiping device is a pen-shaped structure. The adjustable handle 1 has a flexible stick-like shaft, which could be bent. The serving container 2 is connected to one end of the adjustable handle 1 and is a conical-shaped container, so that the external appearance of this embodiment is similar to a pen shape. The liquid supplying portion 24 of the serving container 2 includes one bearing hole 241 and one ball 242 received in the bearing hole 241, thus the adjustable liquid-wiping device in this embodiment has a pen-like appearance.

[0035] While the present invention has been described in terms of what is presently considered to be the most practical and preferred embodiments, it is to be understood that the present invention needs not be limited to the disclosed embodiment. On the contrary, it is intended to cover various modifications and similar arrangements included within the spirit and scope of the appended claims which are to be accorded with the broadest interpretation so as to encompass all such modifications and similar structures.

What is claimed is:

- 1. An adjustable liquid-wiping device, comprising:
 - a adjustable handle, being a stick-like shaft, and having a connecting portion; and
 - a serving container, connecting to the connecting portion of the adjustable handle, the serving container having a liquid-reserving space formed therein and a liquid supplying portion formed thereon.
- 2. The adjustable liquid-wiping device according to claim 1, wherein the adjustable handle is a flexible shaft.
- 3. The adjustable liquid-wiping device according to claim 2, wherein the adjustable handle has a curvable structure.
- 4. The adjustable liquid-wiping device according to claim 1, wherein the adjustable handle is a telescopic shaft.

5. The adjustable liquid-wiping device according to claim 2, wherein the adjustable handle is a telescopic shaft.

6. The adjustable liquid-wiping device according to claim 4, wherein the adjustable handle includes at least two shafts which are interconnected by slipping the one shaft over the other one and a length thereof is adjustable.

7. The adjustable liquid-wiping device according to claim 5, wherein the adjustable handle includes at least two shafts which are interconnected by slipping the one shaft over the other one and a length thereof is adjustable.

8. The adjustable liquid-wiping device according to claim 1, wherein the serving container has an inlet opening which is sealed by a detachable lid.

9. The adjustable liquid-wiping device according to claim 1, wherein the liquid-reserving space contains liquid therein, and the liquid is lotions or medical liquid.

10. The adjustable liquid-wiping device according to claim 1, wherein the liquid supplying portion includes at least one bearing hole and at least one ball being pivotally received in the bearing hole.

11. The adjustable liquid-wiping device according to claim 1, wherein the liquid supplying portion includes a plurality of small apertures.

12. The adjustable liquid-wiping device according to claim 1, wherein the adjustable handle is a hollow tube, and the adjustable handle is connected with a reservoir which contains liquid therein, in which the liquid is transfused to the liquid-reserving space of the serving container through the adjustable handle.

13. The adjustable liquid-wiping device according to claim 1, wherein the adjustable liquid-wiping device is a pen-shaped structure, the serving container is a conical-shaped container, and the liquid supplying portion of the serving container includes a bearing hole and a ball pivotally received in the bearing hole.

14. The adjustable liquid-wiping device according to claim 1, wherein the connecting portion is formed on one end of the adjustable handle.

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