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(54) **PERSONAL GLOVE**

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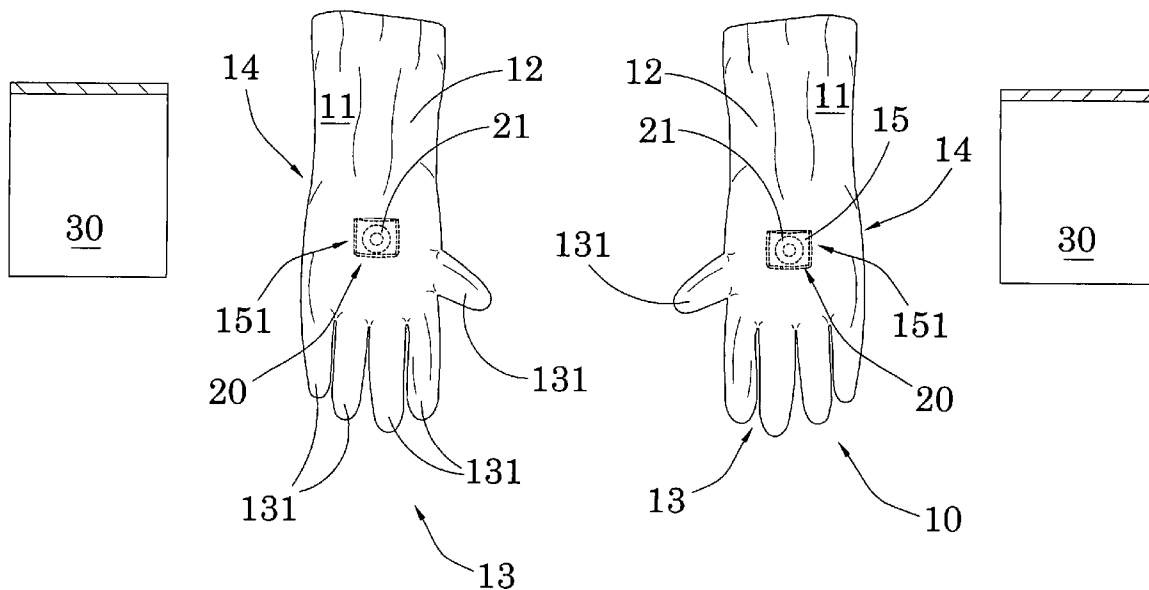
(57) **ABSTRACT**

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A personal glove, which is adapted for detachably retaining at a retention surface having a magnetic attracting ability, includes at least a glove body for being worn by a hand of a user and a magnetic arrangement provided at a dorsal side of the glove body in a hidden manner, wherein the magnetic arrangement is adapted for magnetically affixing at the retention surface to detachably retain the glove body thereon so as to enable the user wearing the glove body in a donning and doffing manner.

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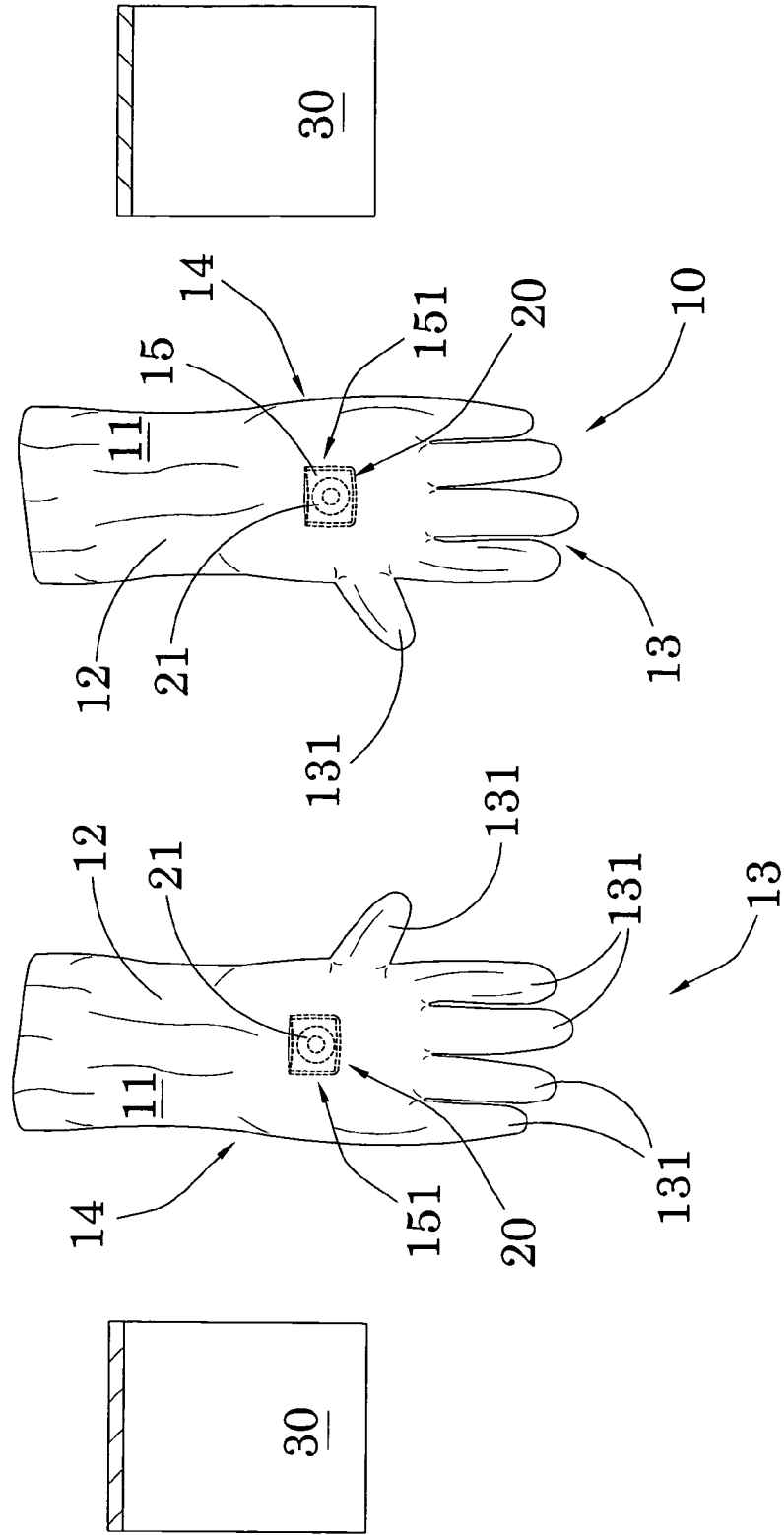


FIG.1

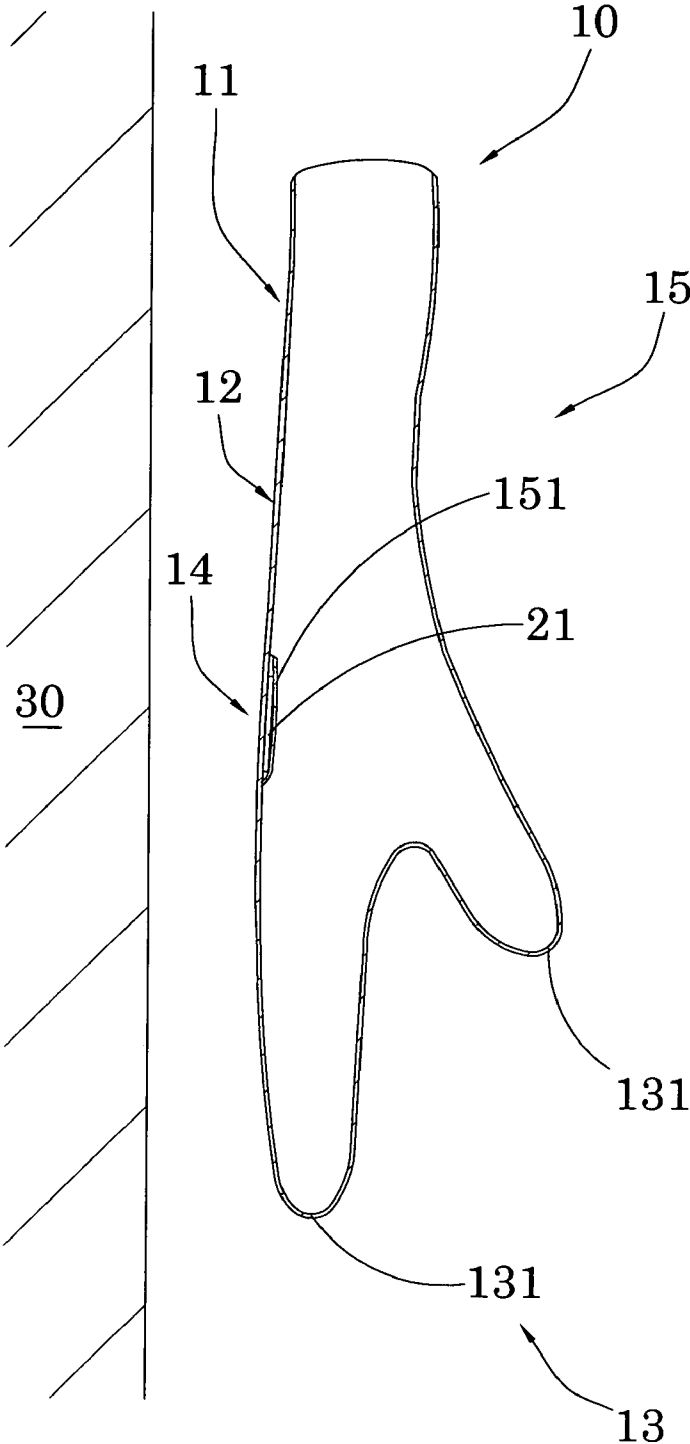


FIG.2

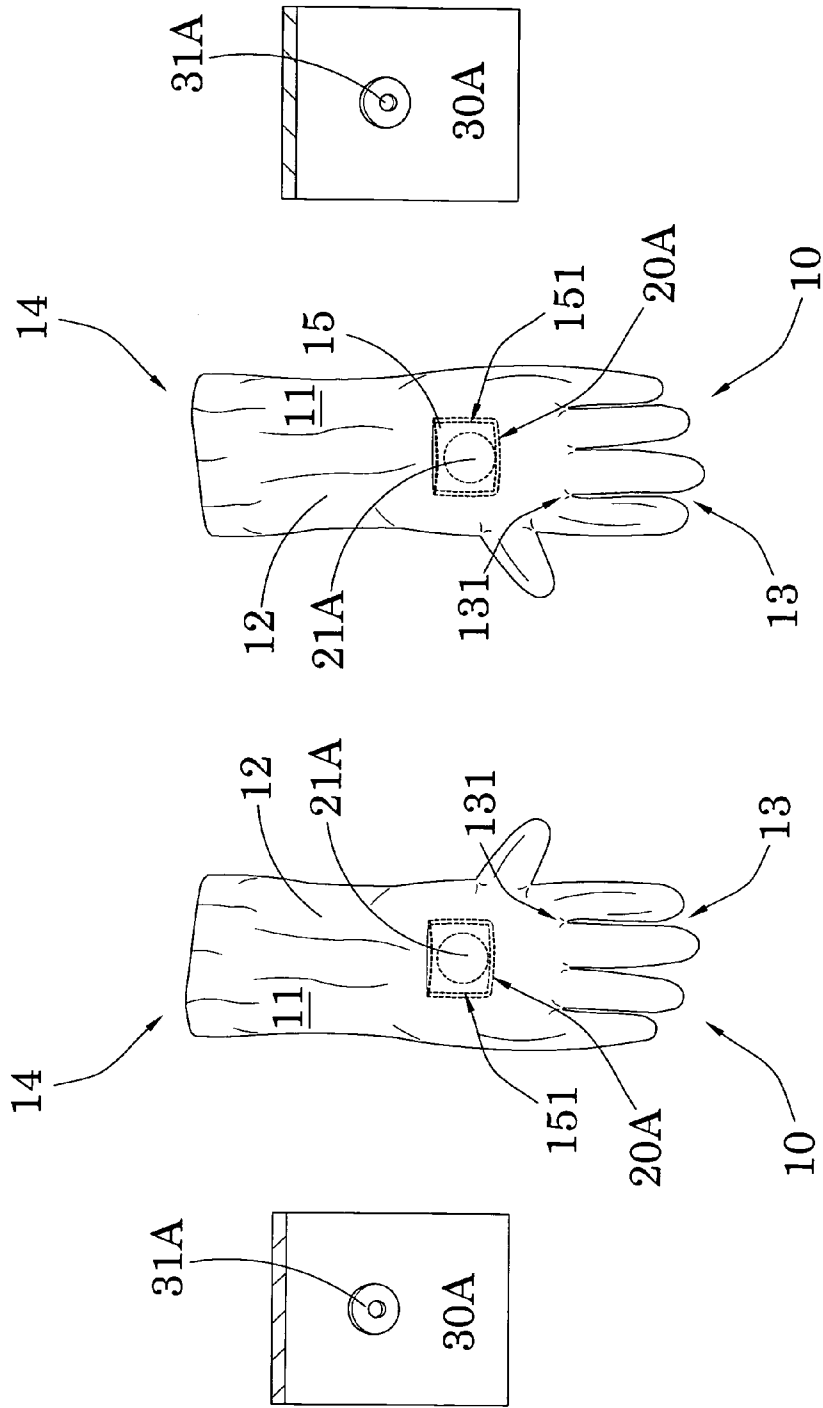


FIG.3

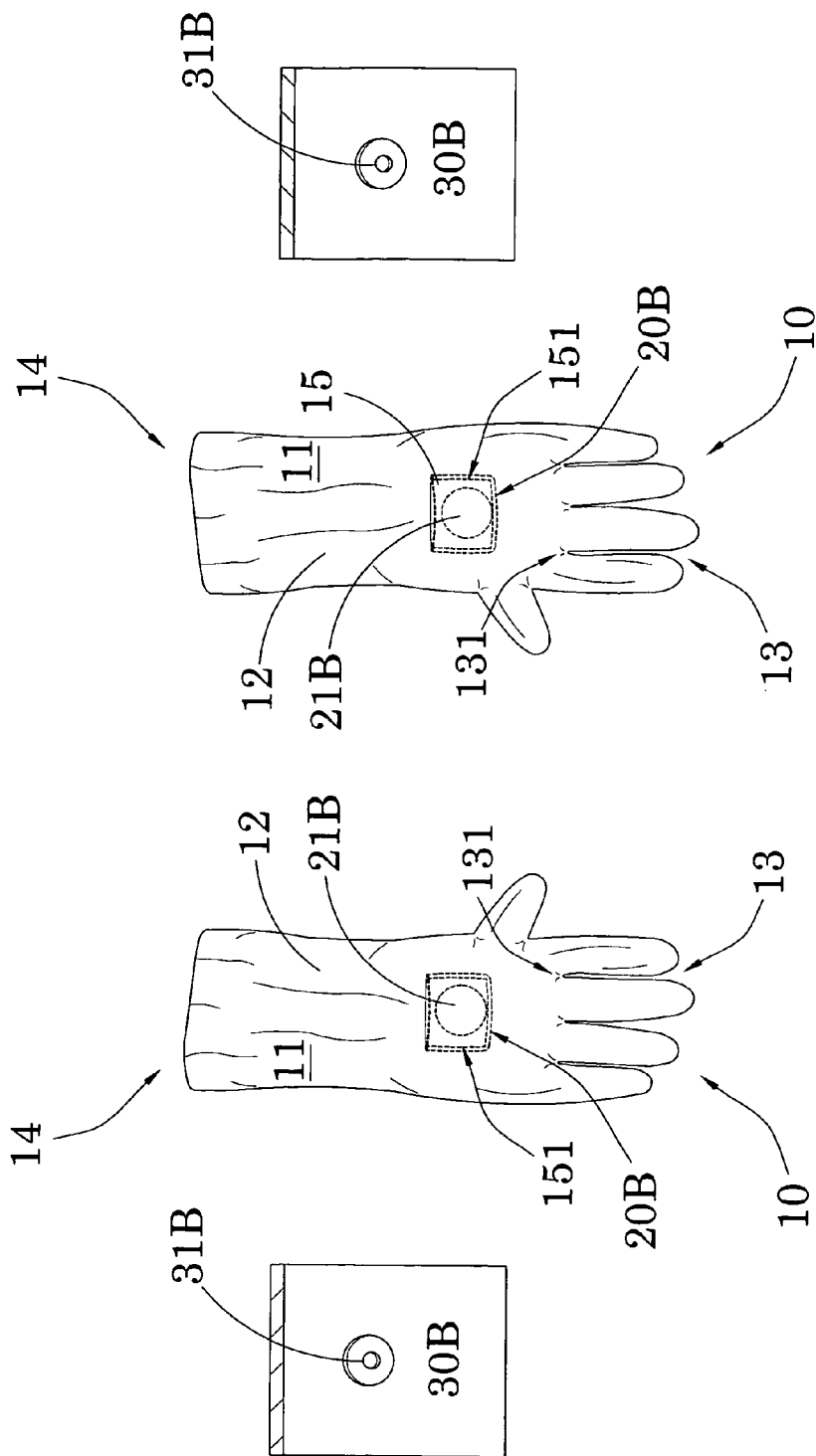


FIG. 4

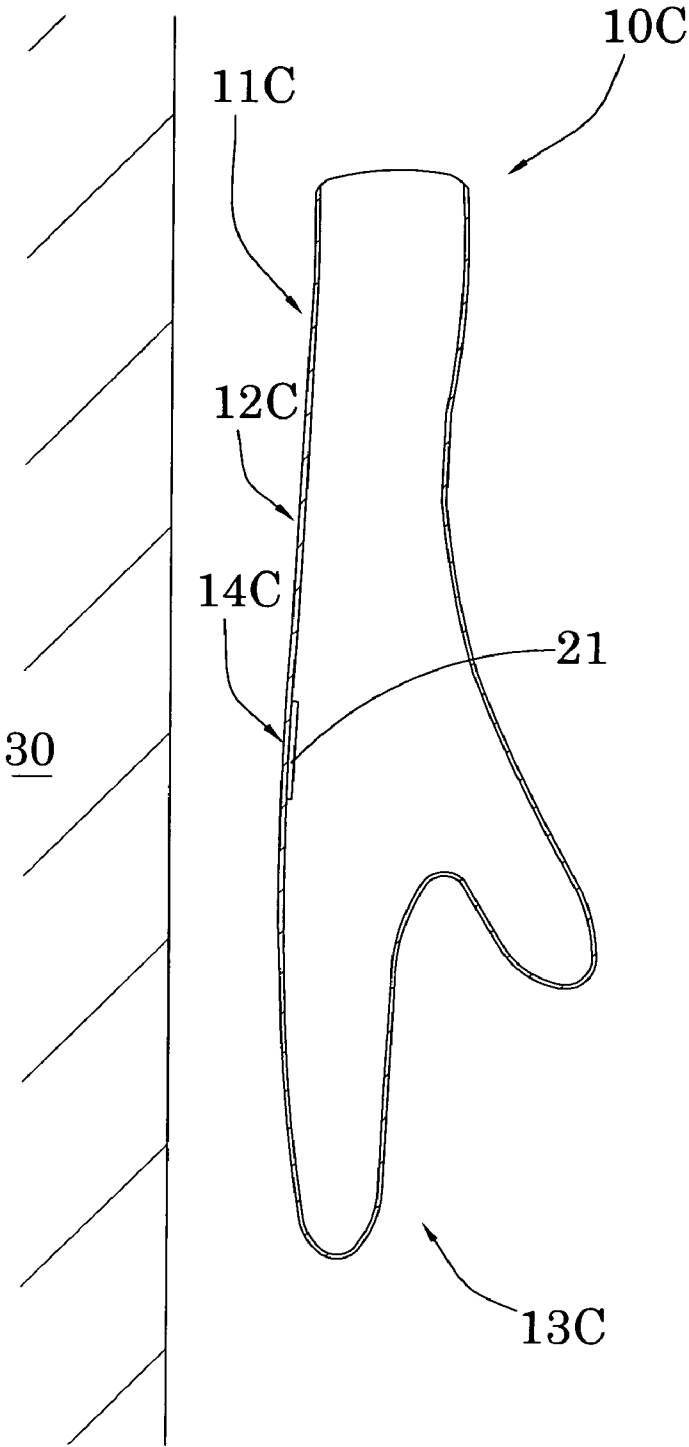


FIG.5

PERSONAL GLOVE

BACKGROUND OF THE PRESENT INVENTION

[0001] 1. Field of Invention

[0002] The present invention relates to gloves, and more particularly to a personal glove, wherein the personal glove comprises a magnetic arrangement provided at the dorsal side of the glove body for magnetically affixing at a retention surface to detachably retain the glove body thereon so as to enable the user easily wearing the glove body in a donning and doffing manner.

[0003] 2. Description of Related Arts

[0004] Gloves are used for not only keeping our hands warm but also protecting our hands to provide a sanitary condition of our hands. For example, in chemical industries, people wear gloves for preventing chemical element from contacting with their hands. It is extremely important that since some chemical elements are hazardous, which may cause skin disease or even cancer. So, when people deal with the chemical elements, they must wear gloves for protection.

[0005] However, such people may still have a chance to skin contact with the chemical element while they remove the gloves from their hands and wear the used gloves back to their hands. For example, it is not hassle that when a wearer removes his left glove from his left hand since his right hand still has a right glove thereon. However, after removing the left glove, his bare left hand must contact with the right glove in order to remove the right glove from his right hand in such a manner that his right hand may merely contact with the chemical element strained on left glove. Even though the right and left gloves are cleaned by water or other solvents before removing the gloves, the chemical element cannot be totally washed by water.

[0006] Moreover, when wearing the gloves, the wearer must use his bare hands to hold the gloves such that the wearer may merely touch the gloves with his bare hand in such a manner that the wearer's hand will contact the residual chemical element on the gloves.

[0007] Even though there are some improved gloves being sold on the markets, how to securely placing them after use is a big issue. Improper placement of the glove not only causes contaminates inside the gloves, but also increases waste produced by disposal of gloves and threatens the environment. Without proper placing after use, the glove gets contaminants from the environment very easily. Finally, the dirty inside of the glove puts those disgusting things on the users' hand. The contaminants left inside the glove are a serious danger to users' health.

[0008] On the other hand, there are some gloves having its glove stand for security placing the glove. The glove stand is usually large and heavy. It is a hassle for people to always move such a big glove stand with them.

[0009] It is necessary to develop a personal glove to solve the frustration involved with the industrial gloves we are all used to and always keeps our hands clean and safe.

SUMMARY OF THE PRESENT INVENTION

[0010] A main object of the present invention is to provide a personal glove, wherein the special glove comprises a magnetic arrangement provided at the dorsal side of the glove body for magnetically affixing at a retention surface to detachably retain the glove body thereon so as to enable the user wearing the glove body in a donning and doffing manner.

[0011] Another object of the present invention is to provide a personal glove, wherein the user is able to use one hand to don and doff the glove body without contacting with the outer surface of the glove body so as to prevent the contamination of the hands of the user by touching the outer surface of the glove body during donning and doffing operation.

[0012] Another object of the present invention is to provide a personal glove, wherein the user is able to easily don and doff the glove in a hand down position. Accordingly, the magnetic arrangement is provided at the lower half portion of the glove body such that when the glove body is magnetically attached on the retention surface, the glove body is naturally secured thereon an inclined manner by its own weight for the user to don and doff easily.

[0013] Another object of the present invention is to provide a personal glove, wherein the magnetic element is affixed to the glove body in a hidden manner such that the user is able to don and doff the glove with good flexibility but without changing its original appearance.

[0014] Another object of the present invention is to provide a personal glove, wherein the glove further comprises a holding pocket and the magnetic element being inside the holding pocket is replaceable such that the user is able to remove or change the magnetic element corresponding to individual need.

[0015] Accordingly, in order to accomplish the above objects, the present invention provides a personal glove, comprising:

[0016] at least a glove body, which is adapted for being worn by a hand of a user, having a dorsal side, a palm side, and a finger portion; and

[0017] a magnetic arrangement provided at the dorsal side of the glove body in a hidden manner, wherein the magnetic arrangement is adapted for magnetically affixing at the retention surface to detachably retain the glove body thereon so as to enable the user wear the glove body in a donning and doffing manner.

[0018] Whereby, the glove body is adapted for easily being worn and detached from a wearer's hand while the glove is supported on the retention surface or anywhere iron can be found in the hands down position.

[0019] These and other objectives, features, and advantages of the present invention will become apparent from the following detailed description, the accompanying drawings, and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] FIG. 1 is a perspective view of a personal glove according to a preferred embodiment of the present invention.

[0021] FIG. 2 is a sectional view of the personal glove according to the above preferred embodiment of the present invention.

[0022] FIG. 3 illustrates a first alternative mode of the magnetic arrangement according to the above preferred embodiment of the present invention.

[0023] FIG. 4 illustrates a second alternative mode of the magnetic arrangement according to the above preferred embodiment of the present invention.

[0024] FIG. 5 illustrates an alternative mode of the glove body according to the above preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] Referring to FIGS. 1 and 2 of the drawing, a personal glove according to a preferred embodiment of the

present invention is illustrated, wherein the personal glove comprises at least a glove body 10 and means for detachably retaining glove body 10 on a retention surface 30.

[0026] The glove body 10, which is adapted for being worn by a hand of a user, has a dorsal side 11, a palm portion 12, and a finger portion 13. As shown in FIG. 1, the finger portion 13 of the glove body 10 has five finger pockets 131 receiving fingers of the user thereat respectively. Alternatively, the finger portion 13 of the glove body 10 can have one finger pocket and one thumb pocket as an oven glove.

[0027] The retaining means preferably comprises a magnetic arrangement 20 for retaining the glove body 10 on a retention surface 30. The magnetic arrangement 20 is provided a non-operating area of the glove body 10 in a hidden manner, wherein the magnetic arrangement 20 is adapted for magnetically affixing at the retention surface 30 to detachably the glove body 10 thereon so as to enable the user wearing the glove body 10 in a donning and doffing manner at a hand-down position. Preferably, the magnetic arrangement 20 is provided at the dorsal side 11 of the glove body 10 in a hidden manner.

[0028] An exterior surface of the glove body 10 has an operating area and a non-operating area, wherein the operating area of the glove body 10 is defined as the finger portion 13 and the inner side of a hand portion of the glove body 10. The non-operating area of the glove body 10 is defined by a non-working area of the glove body 10 such as an outer side of the hand portion and a wrist portion of the glove body 10. In other words, an object is held or grasped within the operating area of the glove body 10 and the rest of the glove body 10 is the non-operating area.

[0029] According to the preferred embodiment, the magnetic arrangement 20 comprises a magnetic element 21 coupled at the dorsal side 11 of the glove body 10 at a wrist portion 14 of the glove body 10 to provide a quick and ease of magnetically attachment between the glove body 10 and the retention surface 30. Accordingly, the glove body 10 can be magnetically attached to the retention surface 30 via the magnetic element 21, wherein the retention surface 30 has a portion made of magnetically attracting material such as metal. Therefore, when the user place his or her close to the retention surface 30, the magnetic element 21 will automatically attract to the retention surface 30. Once the magnetic element 21 is magnetically coupled on the retention surface 30, the user is able to doff the glove body 10 while the glove body 10 is securely retained on the retention surface 30. It is worth to mention that the user is able to mount a metal panel on a wall surface to form the retention surface 30 while the metal panel can be selectively adjusted its position on the wall surface to fit the hand position of the user.

[0030] Accordingly, the magnetic element 21, having a predetermined weight, is a magnet provided at the lower half (at the wrist portion 14) of the glove body 10, the center mass of the glove body 10 will be shifted at the lower half thereof. In particular, the magnetic element 21 not only applies a downward weight force at the glove body 10 for naturally maintaining the glove body 10 in an inclined manner when the glove body 10 is affixed at the retention surface 30, but also enhances the glove body 10 being worn by the user in a donning and doffing manner.

[0031] It is important that when the user wears the glove body 10 and contacts with a liquid chemical substance, the chemical substance will stay on the glove body 10. When the glove body 10 is retained on the retention surface 30, the

chemical substance will naturally drip down towards the finger portion 13 so as to prevent the user from contacting with the outer surface of the glove body 10 during don and doff operation. In addition, the user is able to easily don and doff the glove body 10 in a hand down position when the glove body 10 is inclinedly retained on the retention surface 30.

[0032] In order to retain the magnetic arrangement 20 in position, the glove body 10 comprises a receiving pocket 15 provided at the dorsal side 11 of the glove body 10 to replaceably receive the magnetic arrangement 20 in position. As shown in FIGS. 1 and 2, the receiving pocket 15 has a top opening and a receiving cavity for replaceably receiving the magnetic element 21 therein. In particular, the receiving pocket 15 comprises a pocket layer 151 affixed to the inner surface of the glove body 10 at the wrist portion 14 to define the receiving cavity between the pocket layer 151 and the inner surface of the glove body 10 so as to enable the magnetic arrangement 20 being received in the receiving pocket 15 through the top opening. It is appreciated that the pocket layer 151 can be provided on the outer side of the glove body 10 to form the receiving pocket 15 at the outer surface of the glove body 10 to retain the magnetic element 21 thereat.

[0033] Accordingly, the magnetic element 21 of the magnetic arrangement 20 is replaceable to selectively dispose in the receiving pocket 15 such that the user is able to remove or change the magnetic element 21 corresponding to individual need.

[0034] According to the preferred embodiment, the glove body 10 is used in many different kinds of usages, such as automotive repair, industrial operation, cooking process, experimental operation and so on and is capability of matching with personal dress such as belts, and pants for protecting a wearer from skin contacting with an exterior surface of the glove. For example, the automotive repair glove is used for repair shops, paint and body work. The cooking process glove includes cooking with food in the restaurants, kitchens, and hotels. The industrial operation gloves are mainly used for chemical material handling such as solvents and solutions mixing and separation.

[0035] It is worth to mention that the glove body 10 is mounted on the retention surface 30 or anywhere metal surface. In such a hand down position that the wearer's hand is in naturally bending down manner, the hand of the user is adapted for easily donning and doffing the glove body 10 when the glove body 10 is retained on the retention surface 30 without skin contacting with the exterior surface of the glove body 10.

[0036] For doffing the glove body 10, the wearer naturally bends down his or her hand and slides his or her hand into the glove body 10 from an inserting angle. Once the dorsal side 11 of the glove body 10 is positioned close to the retention surface 30, the magnetic element 21 will magnetically attract to the retention surface 30. At the time when the magnetic element 21 is magnetically coupled on the retention surface 30, the hand of the user is able to detach from the glove body 10 without skin-contacting with the outer surface of the glove body 10. It is worth to mention that after the user doffs the glove body 10, the glove body 10 will remain at the same orientation on the retention surface 30.

[0037] For donning the glove body 10, the hand of the user is naturally placed at a hand down position that the user is able to naturally put his or her hand into the glove body. Since the glove body 10 is retained on the retention surface 30 via the

magnetic element **21**, the user is able to easily locate his or her fingers to align with the finger pockets **131** of the glove body **10**. After the glove body **10** is worn, the user is able to apply a pulling force to magnetically repel the magnetic force between the magnetic element **21** and the retention surface **30**.

[0038] So, the entire donning and doffing process of the glove body **10**, the user does not need to touch the exterior surface of the glove body **10** so as to prevent the user from being infected by any chemical element strained on the glove body **10**. To sum up, the glove body **10** not only better protects our health by helping to eliminate contaminant inside the glove body **10**, but also allows the user to don and doff the glove body **10** without using the opposing hand anywhere there is metal to which the magnet can attach.

[0039] It is worth to mention that the glove body **10** is made of waterproof material and chemical resistance material for keeping the working hands from being damaging by constant use. On the other hand, the material of the glove body **10** is light but durable so as to maximum the life span of the personal glove use.

[0040] FIG. 3 illustrates an alternative mode of the magnetic arrangement **20A**, wherein the magnetic element **21A** is made of magnetically attracting material, such as metal, provided at the lower half (at the wrist portion **14**) of the glove body **10**. The magnetic element **21A** is replaceably disposed in the receiving pocket **15** to retain the magnetic arrangement **20A** in position. Accordingly, the retention surface **30A** has a magnet **31A** coupled on a wall surface such that the user is able to selectively adjust the position of the magnet **31A** on the wall surface to fit the hand position of the user.

[0041] Likewise, FIG. 4 illustrates another alternative mode of the magnetic arrangement **20B**, wherein the magnetic element **21B** is a magnet provided at the lower half (at the wrist portion **14**) of the glove body **10**. The magnetic element **21B** is replaceably disposed in the receiving pocket **15** to retain the magnetic arrangement **20B** in position. Accordingly, the retention surface **30B** has a magnet **31B** coupled on a wall surface such that the user is able to selectively adjust the position of the magnet **31B** on the wall surface to fit the hand position of the user.

[0042] Accordingly, the magnetic element **21B** and the magnet **31B** are two magnets with two opposite poles. In the words, the pole of the face of the magnetic element **21B** is different from the pole of the face of the magnetic **31B**. Having the two-magnet configuration, the glove body **10** can further securely retain on the retention surface **30B**.

[0043] FIG. 5 illustrates an alternative mode of the glove body **10C**, wherein the glove body **10C** has a dorsal side **11C**, a palm portion **12C**, and a finger portion **13C**. The magnetic element **21** is affixed to the inner side of the glove body **10C** such that the user is able to don and doff the glove body **10C** with good flexibility without changing its original appearance. Accordingly, the magnetic element **21**, having a predetermined weight, is provided at the lower half (at the wrist portion **14C**) of the glove body **10C** at the dorsal side **11C** thereof. In other words, the magnetic element **21** is permanently affixed at the inner side of the glove body **10C**. It is worth to mention that the magnetic element **21**, **21A**, **21B** can be selectively incorporated with the glove body **10C** to meet the preference of the user.

[0044] In view of above, the glove of the present invention can substantially provide the following advantages in comparison with the conventional glove stand:

[0045] (1) The chemical work gloves, metal work gloves, auto mechanic gloves, and gardening gloves are all suitable to employ the glove of the present invention. It enhances the donning and doffing operation of the glove body **10**. Since the glove bodies **10** are supported on the retention surface **30** in the hand-down position that the user's hands are in naturally bending manner, the user is able to wear and remove the gloves easily without skin contacting with the exterior of the glove bodies **10** so as to prevent the user's hands be polluted by the chemicals, stains, grease, or dirt on the gloves.

[0046] (2) When the glove bodies **10** are attached on the glove station in the hand-down position, due to the gravity, the chemicals, stains, grease, or dirt on the glove bodies **10** will automatically drop down therefrom. Thus, the operating area of the glove bodies **10** is entirely exposed to the surroundings so as to speed up the drying process of the glove bodies **10**.

[0047] Any conventional glove can be incorporated with the magnetic arrangement to achieve the same function as mentioned above. So, any kind of gloves, such as sports gloves, can be used without altering the original structure so as to minimize the manufacturing cost of the gloves to detachably retain at the retention surface **30**.

[0048] One skilled in the art will understand that the embodiment of the present invention as shown in the drawings and described above is exemplary only and not intended to be limiting.

[0049] It will thus be seen that the objects of the present invention have been fully and effectively accomplished. The embodiments have been shown and described for the purposes of illustrating the functional and structural principles of the present invention and is subject to change without departure from such principles. Therefore, this invention includes all modifications encompassed within the spirit and scope of the following claims.

What is claimed is:

1. A glove for detachably retaining at a retention surface having a magnetic attracting ability, comprising:
 - at least a glove body, which is adapted for being worn by a hand of a user, having a dorsal side, a palm side, and a finger portion; and
 - means for detachably retaining said glove body on said retention surface and for enabling said user wearing said glove body in a donning and doffing manner.
2. The glove, as recited in claim 1, wherein said retaining means comprises a magnetic arrangement provided at said dorsal side of said glove body in a hidden manner, wherein said magnetic arrangement is adapted for magnetically affixing at said retention surface to detachably retain said glove body thereon so as to enable said user wearing said glove body in a donning and doffing manner.
3. The glove, as recited in claim 2, wherein said magnetic arrangement is provided at a wrist portion of said glove body.
4. The glove, as recited in claim 2, wherein said magnetic arrangement comprises a magnetic element coupled a lower half of said glove body such that said magnetic element not only applies a downward weight force at said glove body for naturally maintaining said glove body in an inclined manner when said glove body is affixed at said retention surface, but also enhances said glove body being worn by said user in a donning and doffing manner at a hand-down position.
5. The glove, as recited in claim 3, wherein said magnetic arrangement comprises a magnetic element coupled a lower half of said glove body such that said magnetic element not only applies a downward weight force at said glove body for

naturally maintaining said glove body in an inclined manner when said glove body is affixed at said retention surface, but also enhances said glove body being worn by said user in a donning and doffing manner at a hand-down position.

6. The glove, as recited in claim 2, wherein said magnetic arrangement is affixed to an inner side of said glove body.

7. The glove, as recited in claim 5, wherein said magnetic arrangement is affixed to an inner side of said glove body.

8. The glove, as recited in claim 2, wherein said glove body comprises a receiving pocket provided at said dorsal side of said glove body to replaceably receive said magnetic arrangement so as to retain said magnetic arrangement in position.

9. The glove, as recited in claim 5, wherein said glove body comprises a receiving pocket provided at said dorsal side of said glove body to replaceably receive said magnetic arrangement so as to retain said magnetic arrangement in position.

10. The glove, as recited in claim 8, wherein said receiving pocket comprises a pocket layer affixed to an inner side of said glove body to define a top opening between said pocket layer and said inner side of said glove body so as to enable said magnetic arrangement being received in said receiving pocket through said top opening.

11. The glove, as recited in claim 9, wherein said receiving pocket comprises a pocket layer affixed to an inner side of said glove body to define a top opening between said pocket layer and said inner side of said glove body so as to enable said magnetic arrangement being received in said receiving pocket through said top opening.

12. The glove, as recited in claim 7, wherein said magnetic element is a magnet for magnetically attracting to said retention surface having a portion made of magnetically attracting material.

13. The glove, as recited in claim 11, wherein said magnetic element is a magnet for magnetically attracting to said retention surface having a portion made of magnetically attracting material.

14. The glove, as recited in claim 7, wherein said magnetic element is made of magnetically attracting material for magnetically attracting to said retention surface having a magnet provided thereon.

15. The glove, as recited in claim 11, wherein said magnetic element is made of magnetically attracting material for magnetically attracting to said retention surface having a magnet provided thereon.

16. The glove, as recited in claim 7, wherein said magnetic element is a magnet for magnetically attracting to said retention surface having a magnet with opposite pole provided thereon.

17. The glove, as recited in claim 11, wherein said magnetic element is a magnet for magnetically attracting to said retention surface having a magnet with opposite pole provided thereon.

18. The glove, as recited in claim 13, wherein said glove body comprises five fingers pockets provided at said finger portion.

19. The glove, as recited in claim 15, wherein said glove body comprises five fingers pockets provided at said finger portion.

20. The glove, as recited in claim 17, wherein said glove body comprises five fingers pockets provided at said finger portion.

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