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(54) **HAND WRIST AND FOREARM PROTECTION GLOVE**

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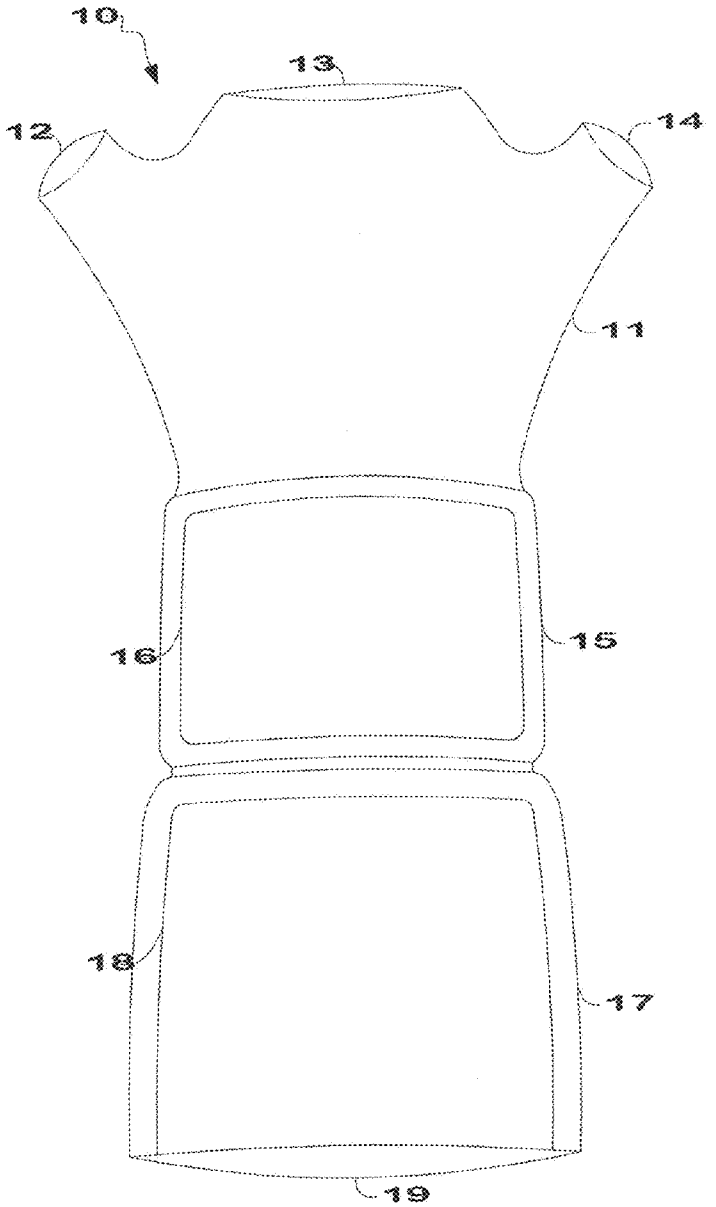
(57) **ABSTRACT**

A glove device for providing protection to the wrist and forearm of a user without restricting or impeding movement can include a lower section that conforms to the hand of a user, an upper section that conforms to the forearm of the user, and a middle section interposed between the lower and upper sections, said middle section conforming to the wrist of the user.



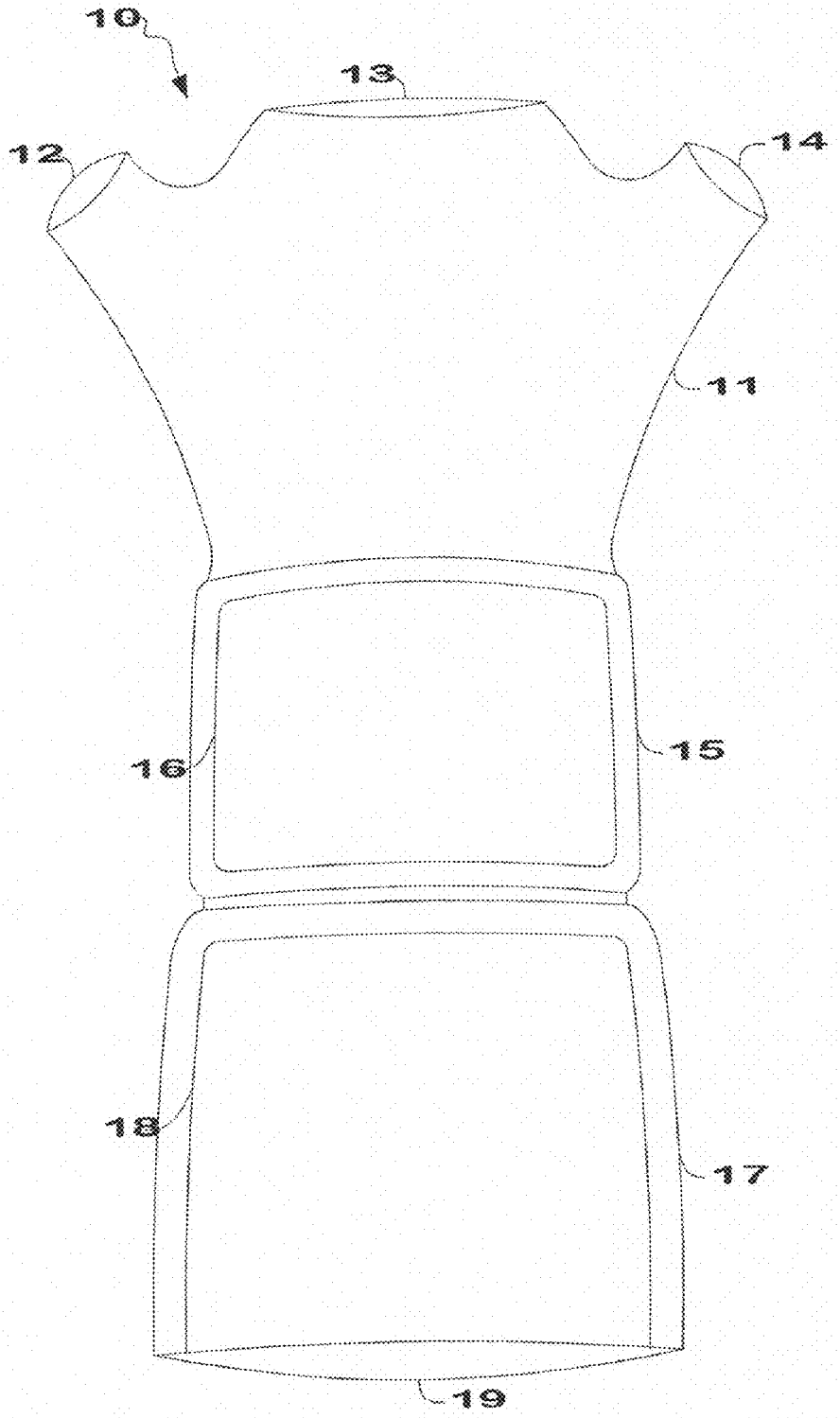


FIG. 1

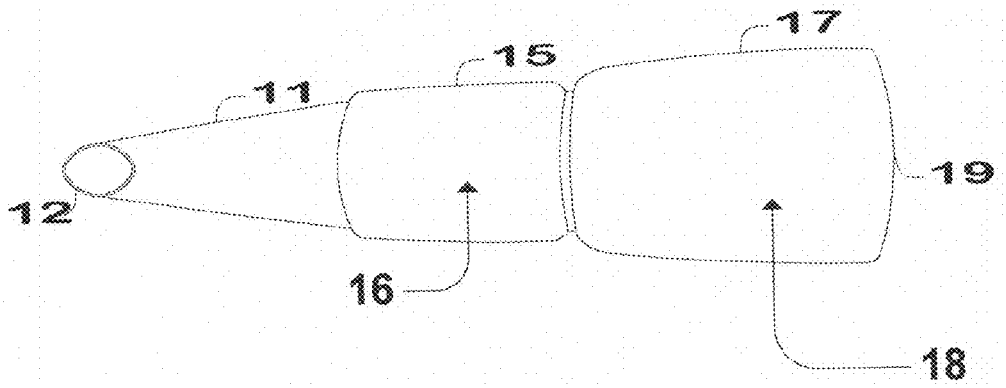


FIG. 2

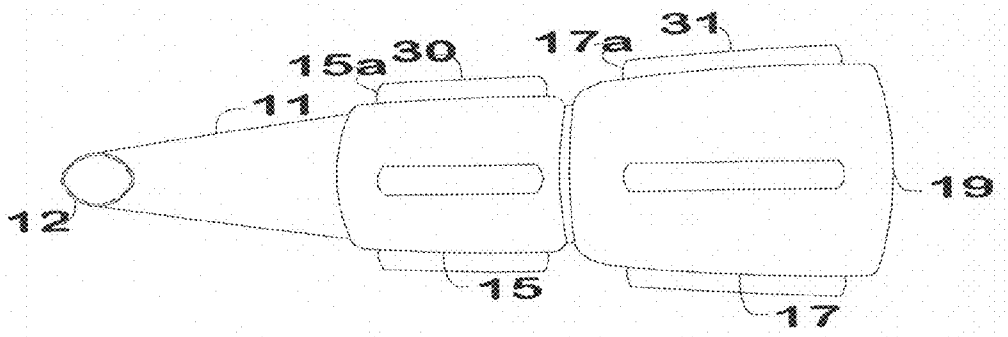


FIG. 3

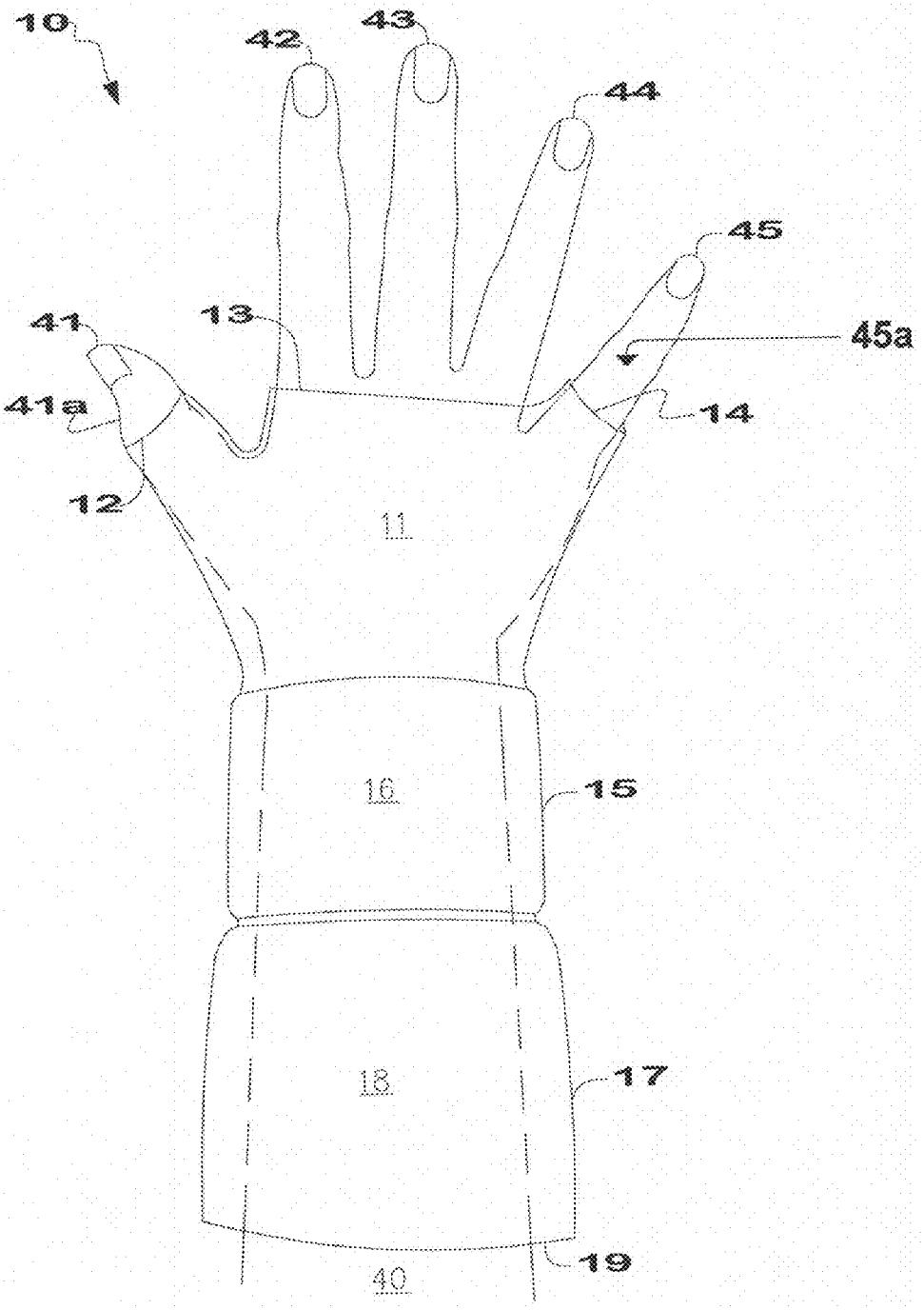


FIG. 4

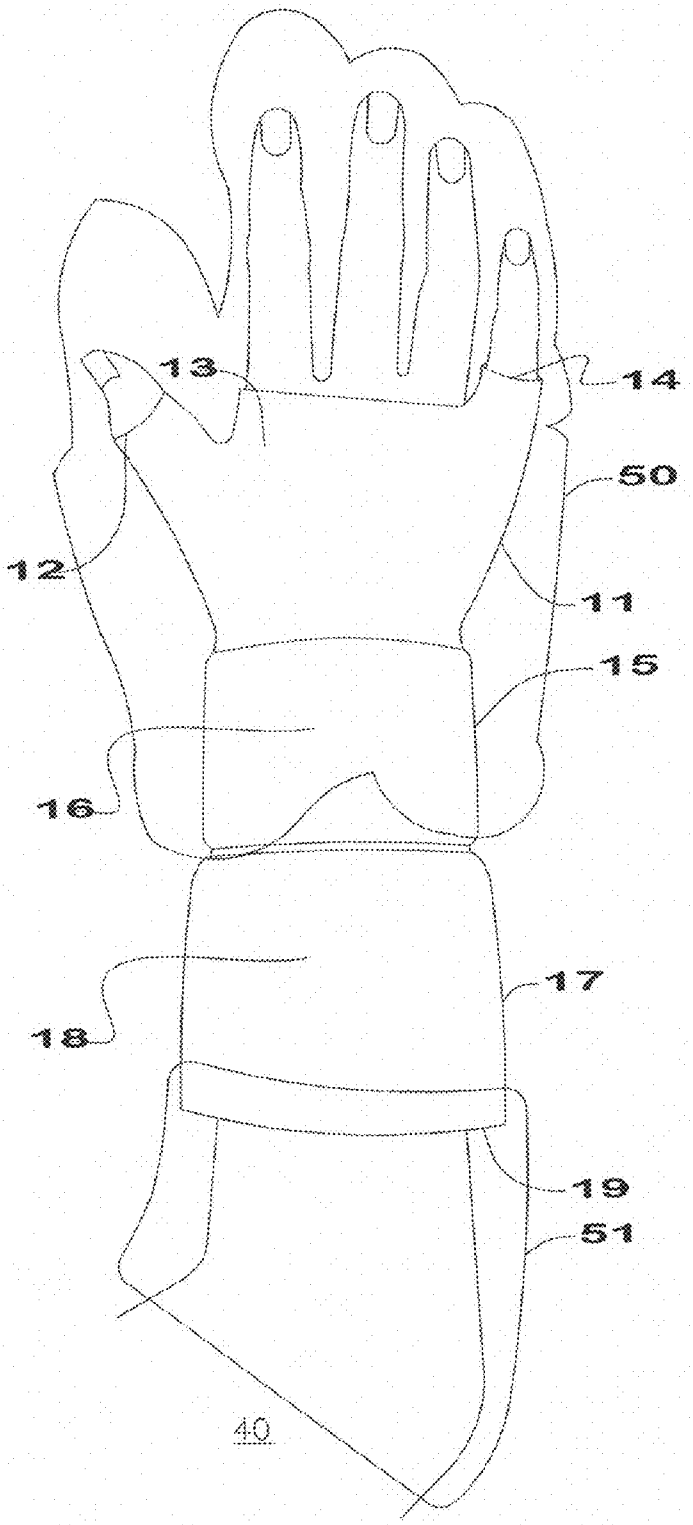


FIG. 5

HAND WRIST AND FOREARM PROTECTION GLOVE

BACKGROUND

[0001] 1. Field of the Invention

[0002] The present invention relates generally to a glove device for protecting the hand, wrist and forearm during sports.

[0003] 2. Description of the Related Art

[0004] Wrist and forearm injuries are among the most common types of injuries suffered by athletes. This is especially true for hockey and lacrosse players who often receive severe lacerations to the exposed skin of the wrist and forearm during game play. These lacerations are often the result of a glancing, slashing or hooking motion in which an opposing players' stick inadvertently makes contact with the athlete's arm in an area that is not protected.

[0005] Although several patent applications have been filed for sports gloves and wrist guards including: Hu U.S. Pat. No. 5,600,849; Hoffman U.S. Pat. No. 5,820,526; and Wissink U.S. Pat. No. 5,768,711, the current state of athletic protection gear typically includes hand and elbow guards which are cumbersome, bulky and restrictive to movement.

[0006] Accordingly, it would be beneficial to provide a glove device that can provide additional protection to a user without being restrictive or impeding the use of conventional protection gear. It is also an objective of the invention to provide a glove device which is simple to use and which is economical to manufacture.

SUMMARY OF THE INVENTION

[0007] The present invention is directed to a glove device for providing protection to the wrist and forearm of a user without restricting or impeding movement. One embodiment of the present invention can include a lower section that conforms to the hand of a user, an upper section that conforms to the forearm of the user, and a middle section interposed between the lower and upper sections, said middle section conforming to the wrist of the user. Another embodiment of the present invention can include a glove device in which one or both of the middle and upper sections contains a padded area.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Presently preferred embodiments are shown in the drawings. It should be appreciated, however, that the invention is not limited to the precise arrangements and instrumentalities shown.

[0009] FIG. **1** is a frontal view of a protection glove according to one embodiment of the invention.

[0010] FIG. **2** is a side view of an alternate embodiment of the invention.

[0011] FIG. **3** is a side view of an alternate embodiment of the invention.

[0012] FIG. **4** is a top view of one embodiment of the invention.

[0013] FIG. **5** is a side view of an alternate embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0014] While the specification concludes with claims defining the features of the invention that are regarded as novel, it is believed that the invention will be better understood from a consideration of the description in conjunction with the drawings. As required, detailed embodiments of the present invention are disclosed herein; however, it is to be understood that the disclosed embodiments are merely exemplary of the invention, which can be embodied in various forms. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the inventive arrangements in virtually any appropriately detailed structure.

[0015] Referring to FIG. **1**, a protection glove **10** according to one embodiment can be made of a strong but lightweight elastic material and includes a hand section **11**, a wrist section **15** and a forearm section **17**. Although each figure illustrates the protection glove as either a right hand embodiment or a left hand embodiment, one of skill in the art will understand that this is for illustrative purposes only, as the invention is configured to include both a right hand version and a left hand version.

[0016] The hand section **11** can be shaped to encompass a users hand on both the palmar and distal sides and includes openings **12**, **13** and **14** through which a users fingers (not shown) can be positioned. The wrist section **15** is interposed between the hand section **11** and the forearm section **17** and can be shaped to encompass the entirety of a users wrist. The forearm section **17** can be shaped to encompass a users forearm and includes an opening **19** through which a user can insert their arm in order to wear the glove.

[0017] In a preferred embodiment, the protection glove **10** can be constructed of, for example, a spandex/nylon blend in order to conform to the arm of a user while also being breathable and water soluble so as to not hold moisture; however, other materials having similar properties are also contemplated.

[0018] In one embodiment, one or both of the wrist section **15** and the forearm section **17** can further include padding **16** and **18**, respectively. As shown in FIG. **1**, padding **16** and **18** can be placed in predetermined locations, or can extend throughout the entirety of the wrist and forearm sections as shown in FIG. **2**. In one preferred embodiment, padded sections **16** and **18** can be sewn into the fabric of the protection glove and can include a malleable but impact resistant material such as, for example, neoprene or polyethylene in order to provide high impact absorption while retaining enough flexibility to move with the arm of a user. The above list is for illustrative purposes only as other materials such as cotton, fabric or other foam/fabric compositions, for example, may also be utilized.

[0019] FIG. **3** illustrates an alternative embodiment of the protection glove **10** that further includes one or more optional impact plates **30** and **31**. As shown, impact plates **30** and **31** can be removably inserted into the wrist and forearm sections via openings **15***a* and **17***a*, respectively, or may be permanently attached during the initial construction of the glove. In either case, impact plates **30** and **31** can be positioned so as to not impede movement of the hand or wrist of a user while wearing the glove. In a preferred embodiment, impact plates **30** and **31** can be constructed of lightweight sturdy material such as plastic, metal or a composite blend, for example, in order to protect a user against impact; however other materials having similar properties are also contemplated.

[0020] FIG. **4** illustrates one embodiment of the protection glove **10** when worn by a user **40**. In this embodiment, the

opening **12** of the hand section **11** can extend to the first knuckle **41***a* of a users thumb **41**. Opening **13** can allow fingers **42-44** to be exposed, and opening **14** can extend to the first knuckle **45***a* of the users little finger **45**. By extending to a portion of the thumb and little finger, the protection glove can maintain contact with a user without restricting movement. Additionally, the forearm section **15** can extend to an upper portion of a users arm without interfering with the movement of the elbow.

[0021] By providing a flexible, thin and lightweight hand section that conforms to the hand of a user, the protection glove **10** does not restrict the dexterity of the hand or fingers, thus allowing the glove to be utilized in conjunction with conventional protective gear, such as a hockey glove **50** and elbow pad **51**, as illustrated in FIG. **5**. Moreover, by providing a padded wrist and forearm section, the glove acts to deflect impacts to the wrist and forearm that would otherwise cause broken bones or lacerations.

[0022] The terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting of the invention. As used herein, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will be further understood that the terms "comprises" and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0023] The corresponding structures, materials, acts, and equivalents of all means or step plus function elements in the claims below are intended to include any structure, material, or act for performing the function in combination with other claimed elements as specifically claimed. The description of the present invention has been presented for purposes of illustration and description, but is not intended to be exhaustive or limited to the invention in the form disclosed. Many modifications and variations will be apparent to those of ordinary skill in the art without departing from the scope and spirit of the invention. The embodiment was chosen and described in order to best explain the principles of the invention and the practical application, and to enable others of ordinary skill in the art to understand the invention for various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A glove device for protecting the hand wrist and forearm of a user, said device comprising:

a lower section configured to conform to the hand, said lower section including a plurality of finger openings through which a finger extends such that a portion of the finger is exposed;

an upper section configured to conform to the forearm of the user, said upper section including an opening for receiving an arm of the user;

a middle section interposed between said lower and upper sections, said middle section being configured to conform to the wrist of the user,

wherein each of said upper, middle and lower sections are configured to accommodate a movement of the user.

2. The glove device of claim **1**, wherein at least one of said middle and upper sections includes a padded area, said padded area being configured to accommodate the movement of a user and absorb an impact.

3. The glove device of claim **2** further comprising:

a hard shield attached to at least one of the middle and upper sections, said hard shield conforming to a shape of the at least one middle and upper sections and being configured to absorb an impact.

4. The glove device of claim **1** further comprising:

a hard shield attached to at least one of the middle and upper sections, said hard shield conforming to a shape of the at least one middle and upper sections and being configured to absorb an impact.

5. The glove device of claim **1** wherein at least one of said middle and upper sections includes a pocket.

6. The glove device of claim **5** further comprising:

a hard shield configured to be removably positioned within said pocket, wherein said hard shield is configured to absorb an impact.

7. The glove device of claim **5**, wherein at least one of said middle and upper sections includes a padded area, said padded area being configured to accommodate the movement of a user and absorb an impact.

8. The glove device of claim **1**, wherein said plurality of finger openings includes a thumb opening, a little finger opening and a three finger opening.

9. The glove device of claim **1** wherein said lower section is configured to be worn under a protective glove.

10. The glove device of claim **1** wherein a section of said middle section is configured to be worn under a protective glove.

11. The glove device of claim **1** wherein a section of said upper section is configured to be worn under a protective elbow pad.

12. A glove device for protecting the hand wrist and forearm of a user, said device comprising:

means for conforming to the hand of the user, said means including a plurality of finger openings;

means for conforming to the forearm of the user, said means including an opening for receiving an arm of the user;

means for conforming to the wrist of a user;

wherein at least one of said means further includes a means for absorbing an impact.

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