

[54] **PROTECTIVE GARMENT FOR KARATE WITH FORCE INDICATING MEMBERS THEREON**

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[51] Int. Cl. A63b 69/00, A41d 13/00

[58] Field of Search 272/76; 273/1 F, 102.1 B; 2/2, 2.5, 3 R; 9/314, 315, 332, 340

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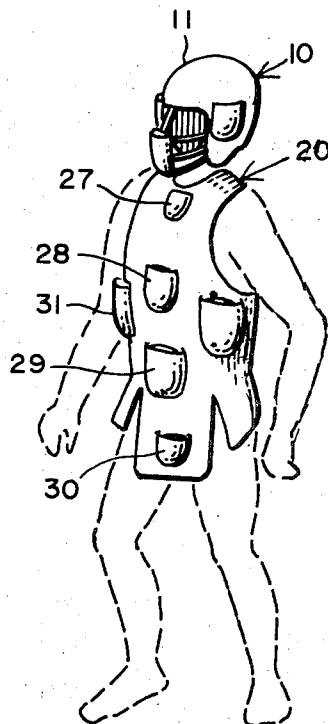
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Primary Examiner—Richard C. Pinkham
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[57] **ABSTRACT**

A uniform for combatants engaging in full contact contest of Karate and the like consisting of a helmet and a torso protective garment and having a plurality of pockets mounted on the helmet and the garment at the positions of the vulnerable parts of their bodies. Within the pockets there are placed plastic bags that are inflated and which are ruptured with an explosive-type noise upon being inflicted a blow of predetermined force by an adversary to indicate an effective blow having been delivered that would have otherwise disabled the recipient of the blow. The pockets and the plastic bags will be made in various sizes to compel different degrees of accuracy required to score a hit for the various parts of one's body. In addition, the plastic bags will be made of various strengths of plastic in order to require predetermined forces to rupture the various bags, the forces being commensurate with the force required to disable the opponent if no protective clothing were used.

5 Claims, 8 Drawing Figures



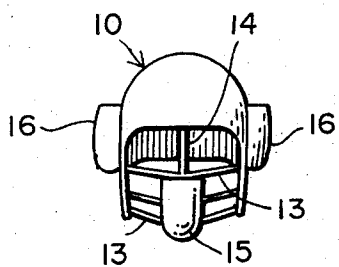


FIG. 4

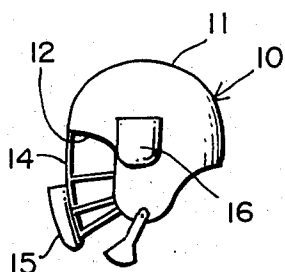


FIG. 5

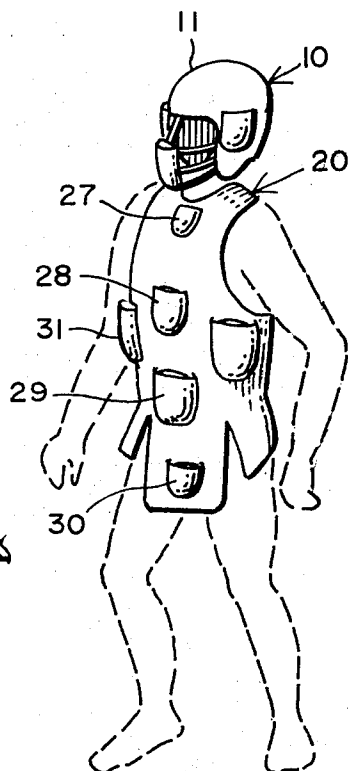


FIG. 1

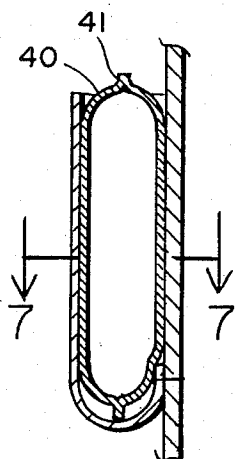


FIG. 6

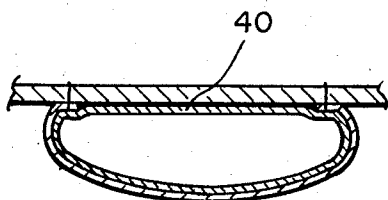


FIG. 7

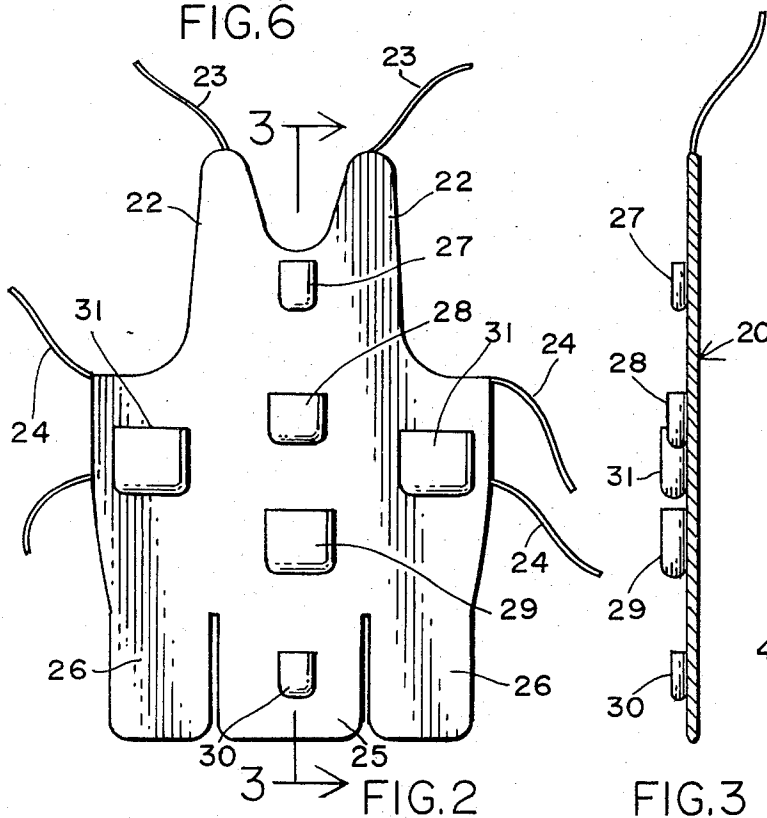


FIG. 2

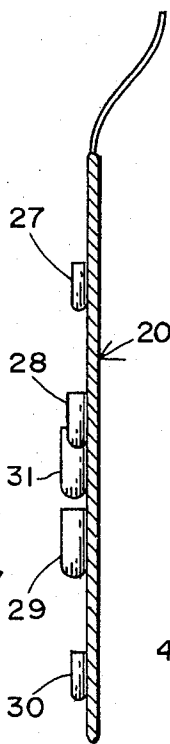


FIG. 3

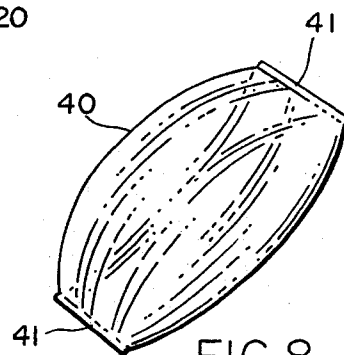


FIG. 8

PROTECTIVE GARMENT FOR KARATE WITH FORCE INDICATING MEMBERS THEREON

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to sport garments and is more particularly directed to such garments that offer protection to the participants of such sports as karate and the like but also assists in determining the effectiveness of each contestant.

2. Description of the Prior Art

There are sports in which two contestants oppose each other to determine a winner or one who exhibits a greater degree of dexterity in that sport than the other. Such sports are boxing and wrestling. However, there are certain sports that involve a high degree of violence that would cause severe injuries to the participants, and therefore in these sports protective garments are required to be used when in combat. These sports include fencing, karate and the like. A problem arises in the use of protective clothing, in that it becomes difficult if not impossible for referees and umpires to determine a winner in a contest. In the field of fencing, this problem was solved by either painting the tip of a foil, which upon contact with the opponent's garment will leave a mark thereon or have the tip of the foil act as an electrode which when contacting the opponent's garment closes a circuit to indicate the contact to the officials, thereby resolving the winner absolutely without any doubts nor any guessing on the part of the officials.

Karate, which is an art of unarmed self defense is the most violent of sports involving two opposing contestants. At the present time, in tournaments the contestants either go through the motions without making contact with his opponent or they were protective clothing to permit execution of their motions. In either instance they are provided a number of officials who observe the contestants in combat and then determine in their judgment, the winner. Since the officials must, in effect, have to guess which motions resulted in proper and effective forceful blows or counterblows and which were either ineffective or glancing in force, the results of most of the contest could not be positive as to the true winner.

The present invention contemplates avoiding the above indicated objections to the manner of determining the winner of a contest in karate and the like by providing means for indicating the part of the body upon which the blow was inflicted on an opponent and also determines whether or not the blow was sufficiently forceful to inflict the disabling effect desired, had the opponent not worn the protective clothing so that there is no doubt as to the winner of the contest.

SUMMARY OF THE INVENTION

Therefore, a principal object of the present invention is to provide participants in the sport of karate and the like with garments that permit the participants to completely execute their motions that would normally inflict damage and injury to the participants, and also permits the proper and exact determination as to the winner of the contest.

Another object of the present invention is to provide the participants of the sport of karate and the like with protective clothing on which certain means are placed

which determines the part of the body received by a blow or motion from one of the opponents by the other and the amount of force inflicted by that blow.

A further object of the present invention is to provide the participants of the sport of karate and the like with protective clothing having targets mounted thereon, which upon being struck by an opponent indicates the force of the blow and the theoretical damage or injury that would have been inflicted if the protective clothing had not been used.

A still further object of the present invention is to provide the participants of the sport of karate and the like with protective clothing having pockets positioned at the vulnerable parts of a person's body and burstable inflated members placed therein, which, upon receiving a direct blow in true combat contact from an opponent, will burst with a loud noise to correctly indicate the execution of a proper blow at a vulnerable part of his opponent's body so as to remove any guessing in the determination as to the winner of the contest.

With these and other objects in view, the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

BRIEF DESCRIPTION OF THE DRAWING

In the drawing:

FIG. 1 is a perspective view of a person shown by dotted lines wearing protective clothing embodying my invention.

FIGS. 2 and 3 are front and side views of the torso protective clothing.

FIGS. 4 and 5 are front and side views of the head protector.

FIG. 6 is a cross sectional view taken along the line 6-6 of FIG. 1.

FIG. 7 is a cross sectional view taken along the line 7-7 of FIG. 6.

FIG. 8 is a perspective view of a burstable inflated member.

Referring to the drawing wherein like numerals are used throughout the several views to indicate similar parts, the numerals 10 and 20 refer to a helmet and torso protector respectively, that embody my invention. Positioned on the helmet 10 and torso protector 20 are a plurality of pockets for containing burstable inflated members 30; the pockets, to be explained in detail hereinafter are positioned at the vulnerable parts of a person's body. The helmet 10 is similar in construction to that used by football players consisting of a protective covering 11 for the head and ears made of fiberglass and padded with rubber and the like on the inside (not shown) surface. Across the face opening 12 are a plurality of spaced bars 13 that join the vertical bar 14 at the center of the front of the helmet 10. Mounted thereon and affixed to the bars 13, 14 is a pocket 15 which is positioned in line with and below a person's nose. On each side of the helmet 10 in alignment with a person's temples is a pocket 16 affixed thereon, as by cementing or gluing.

The torso protector **20** is similar in shape construction to that of a catcher in baseball consisting of layers of padded and blow absorbing materials of somewhat rectangular shape **21** covering the front and side of the torso of a person. There are shoulder portions **22** extending over the shoulders and tied together by straps **23** that extend from the ends of the shoulder portions **22**. A pair of further straps **24** extending from each of the side edges of the body portion **21** are used to secure the latter to the user's body in a snug and fitted manner. At the lower edge of the body portion **21** of the protector **20** extends a centrally position flap **25** with flaps **26** on each side thereof. Along approximately the centerline of the body portion **21** is a plurality of pockets **27**, **28**, **29** and **30** affixed to the body protector **20**. The pocket **27** is in proximity of the user's Adam's apple and the pocket **28** protects the user's solar plexis. The pocket **29** covers the user's stomach while the pocket **30** is in alignment with the user's groin. There are two more pockets **31** astride the stomach pocket **28** which serve to protect the ribs.

Into each of these pockets **15**, **16** and **27** to **31** inclusive there is placed an air filled burstable sealed bag **40** made preferably of plastic material which when struck by a blow of sufficient force will burst accompanied by an explosion-type noise. Each of the bags **40** consist of a sleeve-like member of sheet plastic with both edges **41** sealed to contain air trapped therein.

The bags **40** will be of appropriate size, as are the pockets, to cover the particular target it is covering. For instance, the pocket **27** and bag **40** for the Adam's apple will be smaller in size than the stomach pocket **29** and bag **40** contained therein since the Adam's apple of a person presents a smaller target than the larger size of a person's stomach. Also, since certain parts of a person's body are more vulnerable to blows than other parts, whereby a lesser force struck at one part of a person's body can be as disabling to the combatant as a greater force at another part of his body. For example, a blow in the stomach or ribs would render a less disabling effect on a combatant than the same blow on the person's Adam's apple or groin. In order that this factor be taken into consideration when two persons are engaged in a karate exercise of full contact, the various inflated members **40** are made of sheet plastic of different thicknesses so that blows of varying forces will be scored as a hit. The inflated members **40** of the face, temples, Adam's apple and groin will be formed of thinner plastic than those of the ribs, solar plexis and the stomach so that a blow of certain force will rupture the inflated members **40** of the face, temples, Adam's apple and groin, while a blow of greater force is required to rupture the inflated members **40** of the ribs, solar plexis and stomach. In addition, with the rupturing of the inflatable members **40**, points are attributed to the combatant that causes the rupture of the inflatable member **40**. The amount of the score of points being directly related to the disabling effect of the blow on the combatant had no protective clothing been used.

The contest between two combatants in karate can now be a spectator sport in the same manner as boxing. With each combatant attired in the protective clothing **20** and helmet **10** and the proper inflatable members **40** having been placed in the pockets **15**, **16** and **27** to **31** inclusive, the combatants can then engage in the karate exercise imparting full impact thrusts and blows at each other. As each inflatable member **40** is ruptured, ac-

companied by a loud noise, a score is kept. As in boxing, the combatants will engage in the karate exercise by rounds of a certain duration with rest periods in between. If one of the combatants achieves a certain designated score by rupturing a number of inflatable members **40** or the combatant having the highest score at the end of the prescribed number of rounds will be declared the winner.

Now, karate can be demonstrated as a sport in the same manner as in a boxing contest in which two combatants fight to determine a winner. No longer will it be necessary for judges to observe and evaluate each blow on the basis of whether the blow was of sufficient force to be a disabling blow or lethal blow or whether it was an inconsequential blow. Normally in a karate contest, the combatants act so fast and the blows as well as the counterblows occur in such rapidity that it is difficult if not impossible to see and evaluate all such blows. Consequently, the decision as to which combatant won the contest amounts to an opinion and not as a result of a true measure of the combatants efforts. With the use of the helmet **10** and garment **20**, the combatants can be assured that the one named the winner will be the one who received the highest number points or a predesignated number of points as determined by the ruptured members **40** by each combatant on the garment and head gear of his opponent. If spectators are present observing the contest, they will be apprised of the skill of each of the combatants by the noise emitted by the inflatable members **40** as they are struck by the combatants and ruptured to indicate an effective disabling blow having been delivered.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A uniform for combatants engaging in Karate and the like comprising a protective garment consisting of blow absorbing material, means mounted on said material for securing said garment about the torso of said combatants, a plurality of force indicating means mounted on said garment and positioned so as to cover the vulnerable parts of the body of each of said combatants for indicating when a blow of predetermined force has been inflicted on one of the combatants by the other, each of said means consisting of a pliable member forming an enclosed chamber inflated so as to only contain matter consisting essentially of fluid material, said fluid material including a substantial proportion of gas, said member requiring said blow of predetermined force to become ruptured and to simultaneously emit a substantially loud noise to indicate reception of said blow at one of said vulnerable parts of not less than said predetermined force by said one of said combatants and further means removably securing said pliable members to said garment whereby ruptured members are readily replaced by unruptured members.

2. The structure as recited by claim 1 taken in combination with a helmet mountable on said combatant's head for protection thereto, and a plurality of said pliable members mounted on said helmet so as to cover the vulnerable parts of the head of each of said combatants and said further means removably securing said pliable members to said helmet.

3. The structure as recited by claim 2 wherein said further means comprises a plurality of pockets secured to said garment and said helmet removably receiving said pliable members.

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4. The structure as recited by claim 3 wherein each of said pliable members comprises substantially pliable sheet material formed in a sleeve and sealed along their edges forming an enclosed chamber containing air therein whereby upon the inflicting of a blow of sufficient force thereon said member shall be ruptured and

accompanied by a loud noise.

5. The structure as recited by claim 4 wherein said pliable members positioned in said pockets vary as to the predetermined amount of force required to rupture said members.

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