

Title (en)  
Measuring device for impacts, in particular blows in fighting sports

Title (de)  
Messeinrichtung für Schläge bzw. Treffer bei Kampfsportarten

Title (fr)  
Dispositif de mesure d'impacts en particulier dans les sports de combats

Publication  
**EP 1033152 A1 20000906 (DE)**

Application  
**EP 99103272 A 19990219**

Priority  
EP 99103272 A 19990219

Abstract (en)  
The invention relates to a measuring device for measuring hits or strikes which occur during activities involving martial arts, in particular, a protective vest for taekwondo. The inventive device comprises a layer (1) made of polyurethane which has a multitude of gas-filled, compressible, tubular cavities (2) which open into at least one collecting chamber (3), whereby the cavities (2) have a throttle-like diminished cross-section in the transition area (4) leading into the collecting chamber (3). The variations in pressure resulting from the acting forces in the cavities (2) are measured by a pressure measuring device (6).

Abstract (de)  
Meßeinrichtung für Schläge bzw. Treffer bei Kampfsportarten, insbesondere Schutzweste für Taekwondo, mit einer zumindest einen gasgefüllten, komprimierbaren Hohlraum (2) aufweisenden Schicht (1) zur Messung der einwirkenden Kräfte, wobei die durch die einwirkenden Kräfte im Hohlraum (2) entstehenden Druckschwankungen mittels einer Druckmeßeinrichtung (6) gemessen werden. <IMAGE>

IPC 1-7  
**A63B 71/06**

IPC 8 full level  
**A63B 71/06** (2006.01); **A63B 21/008** (2006.01); **A63B 69/00** (2006.01); **A63B 69/32** (2006.01)

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Citation (search report)  
• [X] WO 9518655 A1 19950713 - ANDERSSON LARS [SE], et al  
• [X] DE 3903127 A1 19900809 - SCHRAMM GUENTHER [DE]  
• [X] US 4208048 A 19800617 - WINTERBOTTOM HAROLD E [US]

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**EP 1033152 A1 20000906; EP 1033152 B1 20011219**; AT E211010 T1 20020115; AU 2894600 A 20000904; DE 59900580 D1 20020131;  
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