

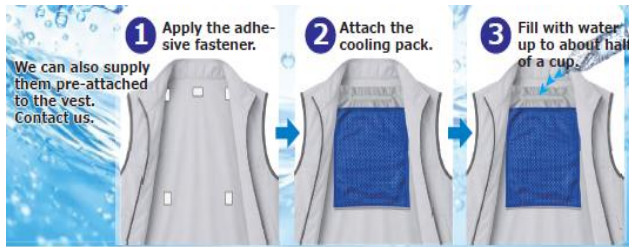
★ The coolbit Patents for Heat Protection Solutions

The Three Key Products and Patents

1 / coolbit® Water Cooling Cap US 12727637



2 / Water-in Wear Unit JP7887068 PCT Progress



3 / Ice Pocket Cooling Vest US 9271530



Our patented cooling technologies help protect workers and athletes under extreme heat.

Patented US 12727637
JP7518321 WO/126539



We are seeking a company to handle development, production, and joint sales under a license based on these U.S. patents.

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1 /coolbit® Water Cooling Cap JP7518321/ WO2025/126539

PAT.US 12727637

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WIPO PCT
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A42B 1/019 (2021.01)
A42B 1/024 (2021.01)
A42B 1/036 (2021.01)

(71) 出願人: 株式会社日曜発明ギャラリー
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(72) 発明者: 小林 貴博(KOBAYASHI TOYOHIRO);
〒4250053 静岡県焼津市すみれ台二丁目1番3号 (JP); 山田 明子(Yamada Akiko); 〒4250053

(54) Title: COOLING STRUCTURE USED FOR CAP OR LIKE
(54) 発明の名称: 帽子等に用いる冷却構造

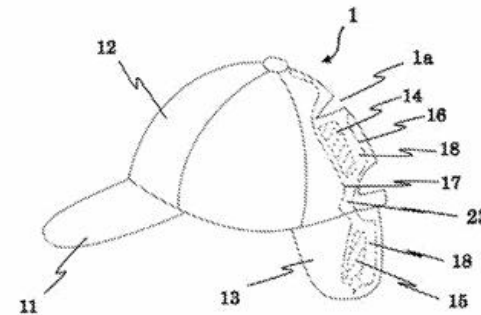
(57) Abstract: [Problem] To provide a cooling structure for a cap or the like employing a logical and effective water supply method for supplying moisture to a water-absorbing material incorporated in a cap or the like to obtain a cooling effect through evaporation. [Solution] A water pouring port 1a that enables pouring of water from a PET bottle is provided at the crown portion of a cap body 12 of a cap or the like. On the reverse sides of the cap body 12 and a flap portion 13, one surface or parts of both surfaces of water-absorbing materials 14, 15 in sheet form are covered with moisture-permeable waterproof fabrics 16, 17. A gap between the water-absorbing materials 14, 15 and the moisture-permeable waterproof fabrics 16, 17 through which water flows serves as a water passage 18. A drain port enabling detection of water reaching the lower end of the flap portion is also provided. The water-absorbing materials are disposed so as to clear a head peripheral size adjustment portion and a boundary/connection portion between the cap body and the flap portion. A connection water passage 23 of the water-absorbing materials is connected by a sheath pipe system constituted of the moisture-permeable waterproof fabrics. Thus, a structure enabling simplification of the assembly of the cap is provided.



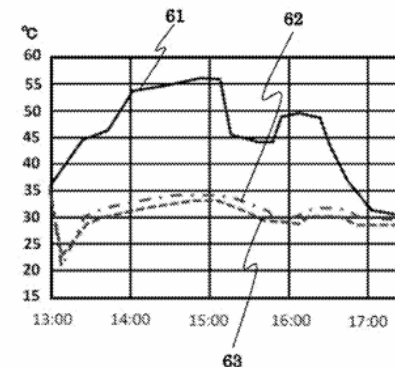
Inventor;
KOBAYASHI TOYOHIRO



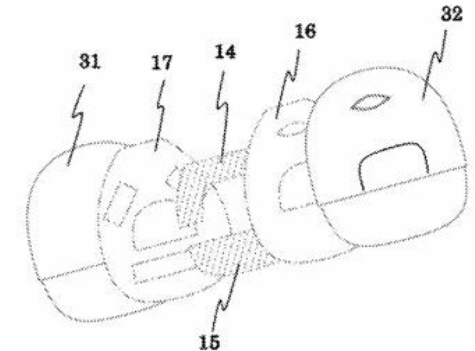
Fig;1



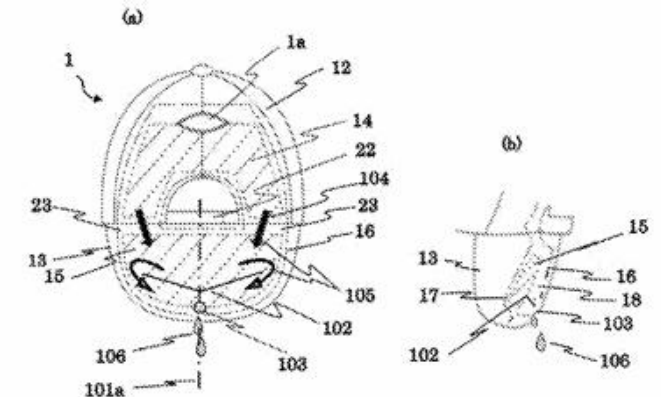
Fig;6



Fig;3



Fig;10



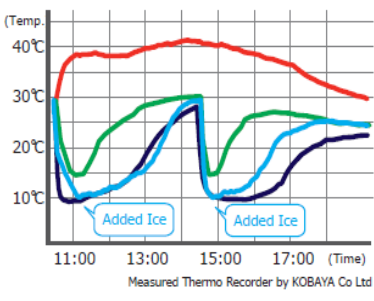
3 / Ice Pocket Cooling Vest PAT.US 9271530

Product series based on this patent

★coolbit Ice Pocket Cooling Vest



★coolbit Met Cover Ice-In



★coolbit Ice Pocket Hat

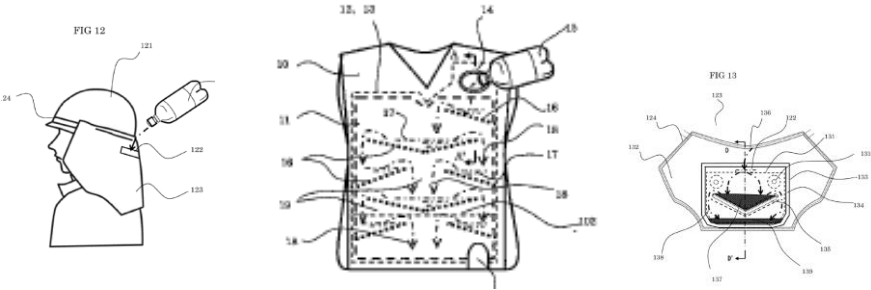


Outdoor temperature
Ice
Water
Gel Pack

■Patent Overview

This is a cooling structure for a garment encased in a waterproof, breathable material, featuring a water inlet and a gap designed to allow water to spread across the entire surface and evaporate, thereby generating a cooling effect.

(12) United States Patent Kobayashi	(10) Patent No.: (45) Date of Patent:	US 9,271,530 B2 Mar. 1, 2016
(54) WEARABLE IMPLEMENT	(56) References Cited	
(71) Applicant: Nichiyu Hatsumei Gallery Co., LTD, Shizuoka (JP)	U.S. PATENT DOCUMENTS	
(72) Inventor: Toyohiro Kobayashi, Shizuoka (JP)	2006/0191063 A1 * 8/2006 Elkins ----- A41D 13/0057 2/458	
(73) Assignee: Nichiyu Hatsumei Gallery Co., LTD, Shizuoka (JP)	2006/0289077 A1 * 11/2006 Enslin ----- A41D 13/0053 2/81	
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 147 days.	(Continued)	
	FOREIGN PATENT DOCUMENTS	
(21) Appl. No.: 14/316,784	JP H11-172510 A 6/1999	
(22) Filed: Jun. 26, 2014	JP H11-217707 A 8/1999	
(65) Prior Publication Data US 2014/0318154 A1 Oct. 30, 2014	(Continued)	
Related U.S. Application Data	OTHER PUBLICATIONS	
(63) Continuation of application No. PCT/JP2012/064264, filed on Dec. 21, 2012.	International Search Report for PCT/JP2012/064264 dated Mar. 5, 2013.	
(30) Foreign Application Priority Data Jan. 10, 2012 (JP) ----- 2012-014630	Priority Examiner — Daniel Rohloff (74) Attorney, Agent, or Firm — Yokoi & Co., U.S.A.; Toshiyuki Yokoi	
(51) Int. Cl. F25B 21/02 (2006.01) A41D 13/005 (2006.01) F25D 7/00 (2006.01)	(57) ABSTRACT	
(52) U.S. Cl. CPC ----- A41D 13/0056 (2013.01); F25B 21/02 (2013.01); F25D 7/00 (2013.01); F25B 23/11/02 (2013.01)	Water absorbing material provided in a planar shape over the substantially entire surface of a front side surface of cooling clothing is layered with an intermediate cloth having air permeability and a waterproof material or sheet, which is waterproof, to be sandwiched and wrapped therewith. By sewing or by sealing and joining the intermediate cloth and waterproof cloth or sheet, waterproof water dividers having length in the horizontal direction are provided at a suitable inclined angle of locations. Water that is inserted from a water inlet in the upper part of the cooling clothing by a PET bottle or the like flows toward the lower part of the cooling clothing between the surface of the water absorbing material and the waterproof cloth, meandering left and right continuously or in a stepwise shape, and making a puddles arise like terraces is prescribed locations here and there.	
(58) Field of Classification Search CPC ----- A41D 13/0053; A41D 13/0056; A41D 20/005; A41D 24/0022 USPC ----- 62/259.3 See application file for complete search history.	6 Claims, 10 Drawing Sheets	



4 | **Four Licensing Options for U.S. Partners**

coolbit® patented cooling technologies can be licensed in multiple ways depending on your production capability and market strategy.

1) **Manufacturing License**

For PPE manufacturers with U.S. factories

Enables “**Made in USA**” strong advantage for government & military, and utility contracts

2) **Import License**

For distributors & wholesalers with nationwide networks

Vietnam factory capacity: **1,000 units / 30–60 days**

Zero initial investment: import finished products directly

3) **Exclusive Territory License**

For specific states or industries by exclusive rights

Target industries:

Construction, Logistics, Oil & Gas, Utilities

4) **OEM / Co-branding License**

For existing PPE and uniform manufacturers

Integrate coolbit® cooling modules into partner's PPE or uniforms

Compatible with: Fan-cooled jackets (Hybrid Cooling),
ce vests, Workwear, Sports gear



**We welcome discussions on
licensing, OEM integration, and
joint development opportunities.**

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