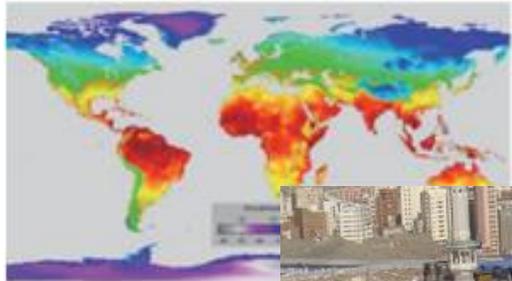


Proposal;

“Elevating UAE’s Extreme Heat Adaptation to a Global Standard
International Patent Technology:
Water-In Cool CAP”



Cooling Inner Layer for Pilgrimage Participants
World Patent: WO 2025/126539

■ **Contact ;**
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HP: <https://www.kobaya-co.jp> <https://coolbit.jp>

1 UAE's Climate Challenges and National Mission

- The UAE is one of the countries facing the most extreme heat conditions in the world. Outdoor workers—construction, security, logistics, tourism—operate throughout the year. Worker Welfare, ESG, and Climate Adaptation are national strategic priorities. The frequent heatstroke incidents during pilgrimage seasons highlight the need for stronger, region-wide countermeasures. Now is the time for the UAE to lead Middle Eastern heat-safety initiatives.

★Concrete action is required to prevent recurrence.

■1,300 pilgrims die from heatstroke in Mecca



coolbit®

私たちは予期しない熱波や地球温暖化から世界の人々を守りたいと考

カジュアルデザイン スポーツデザイン ヘルメットインナー
アラブ系巡礼者用インナー



2 Japan-Developed International Patent Technology:

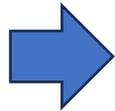
“Water-In Cool CAP”

- A proprietary cooling structure filed under the PCT international patent system. Reduces surface body temperature and significantly lowers heatstroke risk. Lightweight, low-cost, and maintenance-free. Proven performance in Japanese construction, logistics, and municipal sectors. Can be worn under traditional Arab garments (Kandura/Thobe).
- →The only cooling technology that naturally integrates with Middle Eastern cultural attire.



Global Patent Protection

Japan Patent
Granted: JP 751832

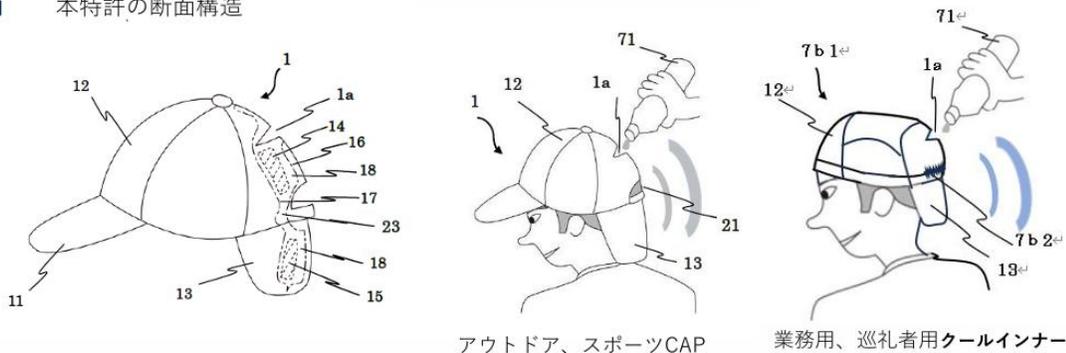


PCT International
Application:
WO 2025/126539



International Search Report:
Recognized as a highly
promising global patent.

【図1】 本特許の断面構造

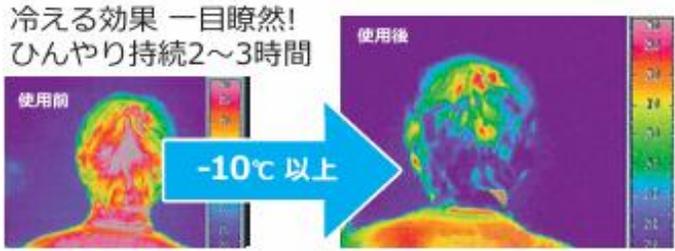


Exhibited at NAUMD 2025 (USA) and Japan Industrial Exchange Fair 2025.

Up to 10,000 units requested by U.S. leisure-facility staff

3 Scientific Effectiveness (Verified Data)

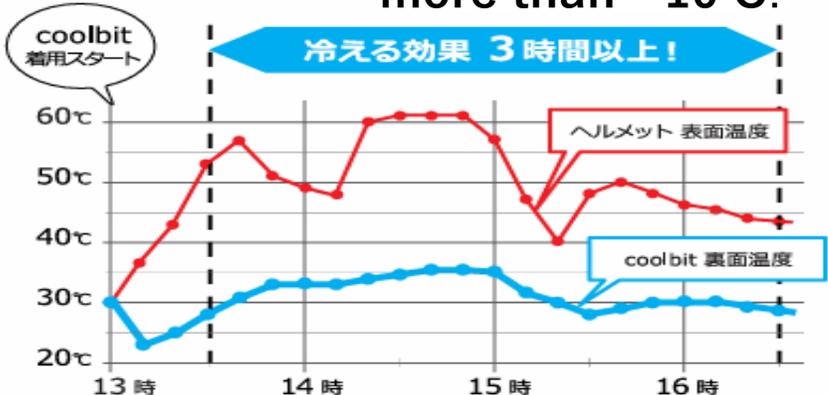
Significant reduction in surface temperature
 Improved perceived temperature
 Maintained work performance
 Substantial reduction in heatstroke risk



[INFO; Link to YouTube](#)

It's colder by more than -10°C!

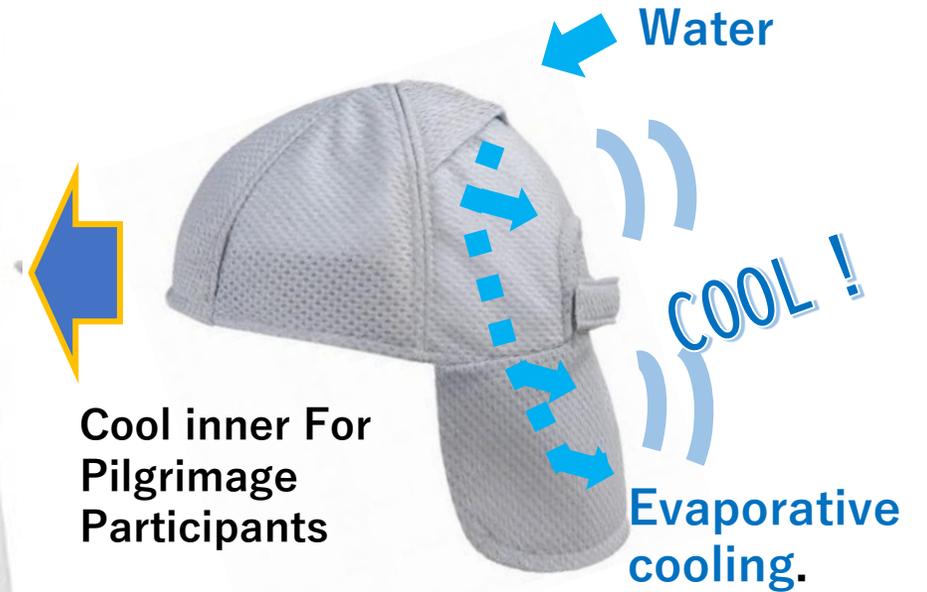
涼しさ長時間持続!



夏の炎天下で、人形にヘルメットと保水させたcoolbitを着用させヘルメット表面とcoolbit裏面を計測した温度推移グラフです

Innovation!
 You can find only here.

Cool
 with only
50 ml of water



Cool inner For Pilgrimage Participants

Cooling Inner Layer for Pilgrimage Participants
World Patent: WO 2025/126539

5 Benefits for the UAE (2): ESG & SDGs

Strengthens climate-leadership momentum following COP28.

A concrete solution for “Extreme Heat Adaptation.” A low-cost, immediately deployable social-impact technology.

This technology fully aligns with the UAE Worker Welfare Standards and the COP28 legacy of “Extreme Heat Adaptation.”

SIV(シルバー)



NVY(ネイビー)

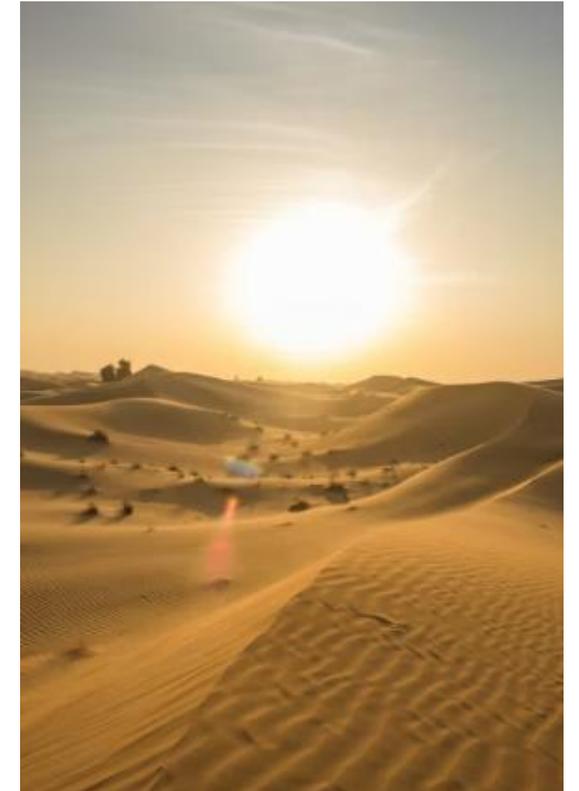


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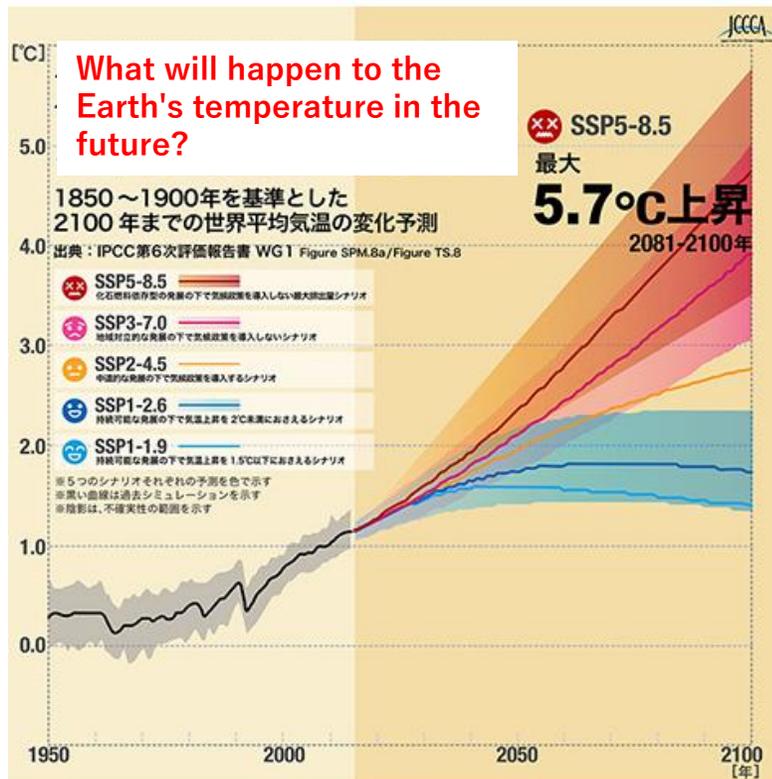
Item No. CBWA40W-Color

Cool inner For Pilgrimage Participants



6 Benefits for the UAE (3): Regional Leadership in the Middle East

- Scalable deployment to Saudi Arabia, Qatar, Kuwait, Bahrain, and Oman.
- Can be established as a “UAE-origin safety standard” for the region.
- Enables the UAE to lead Middle Eastern heat-safety initiatives.



The UAE is the most internationally trusted nation in the region and the only country capable of driving regional standardization.



7 A 20-Year Exclusive Middle East License Offered Only to the UAE

Why do we offer exclusive rights only to the UAE?

- It is difficult for a Japanese company to independently develop the Middle Eastern market. We originally planned to abandon patent filings in the region. We deeply resonate with the UAE's national mission and values. We believe the UAE is the most suitable nation to **lead Middle Eastern heat-safety initiatives.**

→Therefore, we grant full discretion and exclusive rights solely to the UAE

We also offer other cooling technologies

Cooling innerwear for professional helmets
Body cooling innerwear



Children's cooling flap hat and cap
Guard the UV protection



Revolutionary: Cools the entire back of the head, which controls motor nerves, for agile movement!

coolbit®

8 Exclusive License Model (Structure)

KOBAYA (Japan)

| Technology transfer & quality control



UAE Government / Government-affiliated entity (Exclusive Licensee)

| 20-year exclusive rights in the Middle East

| (GCC region: UAE, Saudi Arabia, Qatar, Kuwait, Bahrain, Oman)



Governments, companies, and workers across the Middle East

| Adoption & dissemination



Social impact (Toward zero heatstroke fatalities))

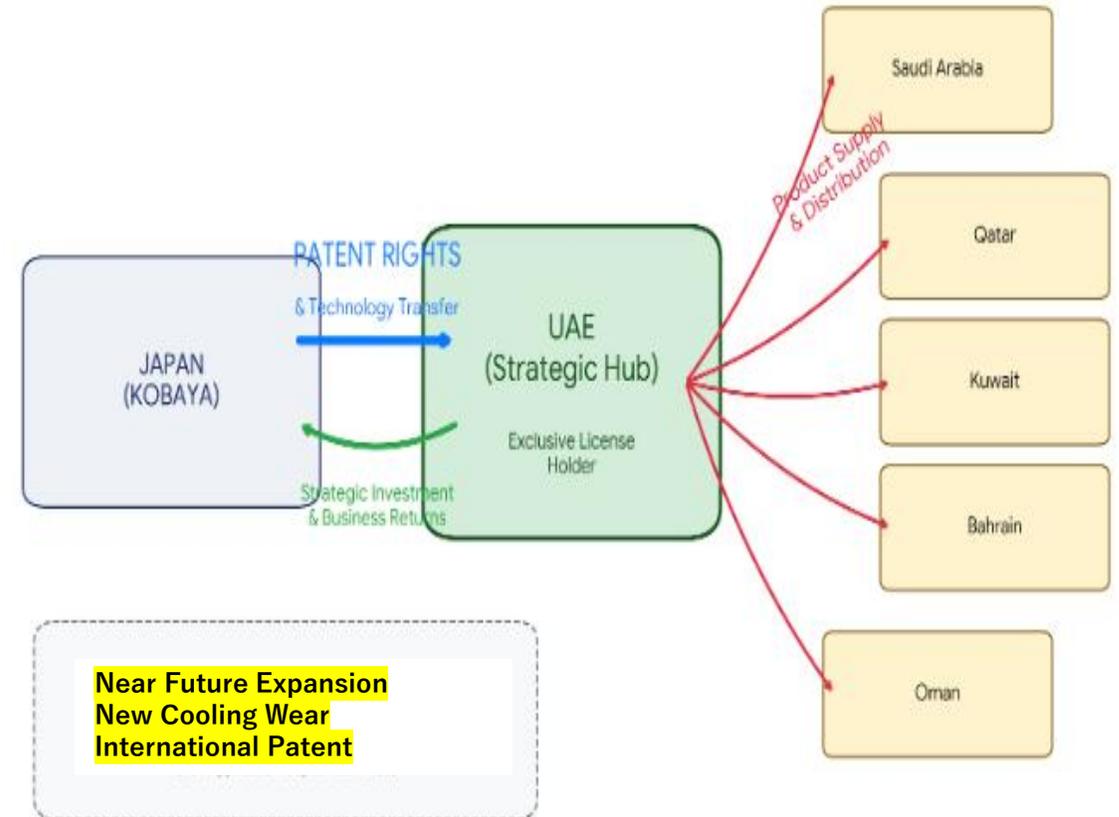


9. What We Expect from the UAE Partner

- Distribution capability in UAE / GCC
- Local production capability or OEM coordination
- Government / corporate sales channels
- Joint development for UAE-specific models
- Support for pilot testing (construction, logistics, security sectors)

10. Business Model Options

- Exclusive GCC license
- Non-exclusive UAE license
- Royalty-based licensing
- Technology transfer + OEM production
- Joint venture model
- Pilot project (1,000–5,000 units)



Establishing the UAE as the Global Leader in Safety Solution

1 1 National Value for the UAE

Positions the UAE as the “standard-setting nation” for heatstroke prevention in the Middle East.

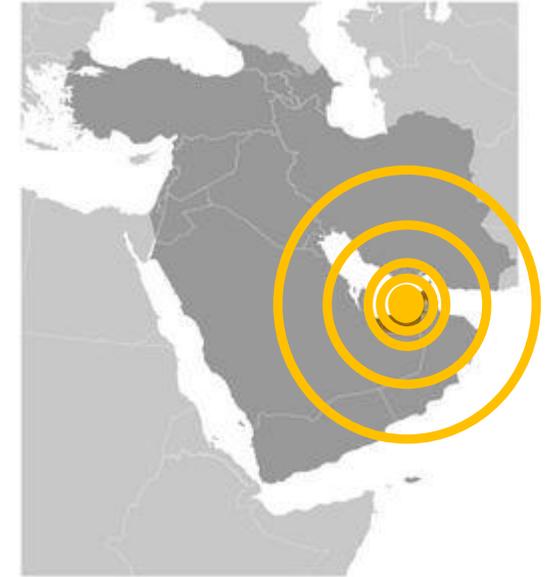
Enhances international evaluation of Worker Welfare.

Deepens technological cooperation with Japan.

Owning the international patent allows the UAE to manage technology transfer to other nations.

Enables the UAE to promote a “UAE-origin global safety standard.”

Take concrete action against climate change.



Thank you!
Best Regard

ADDITION; Near Future Expansion, coolbit Water-IN Cooling WARE

We have also developed a new evaporative-cooling unit (Cooling Wear), currently under patent examination in Japan and will be international patent. A draft brochure is attached for your reference.

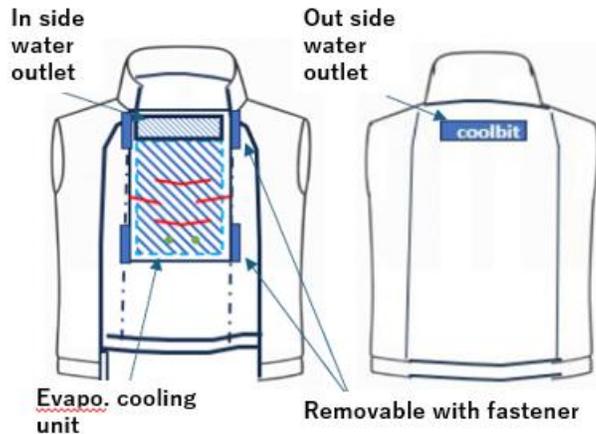
■ coolbit will introduce near future Water-In Cool Wear Evaporative Cooling + Air-Flow System Next-Generation Cooling Gear for Outdoor & Industrial Use



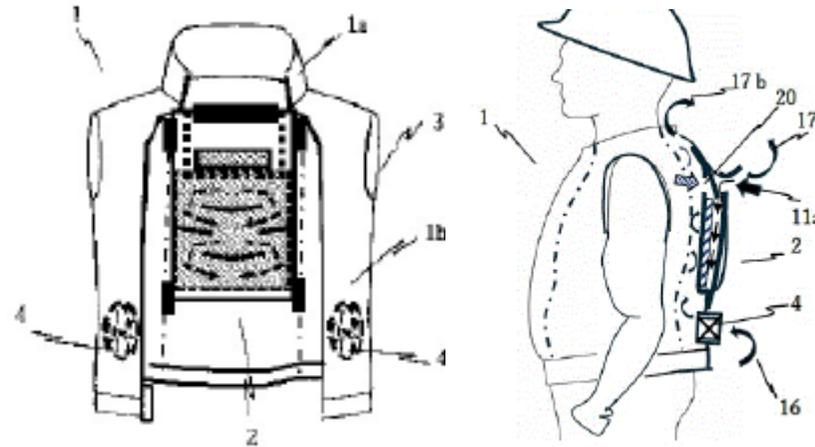
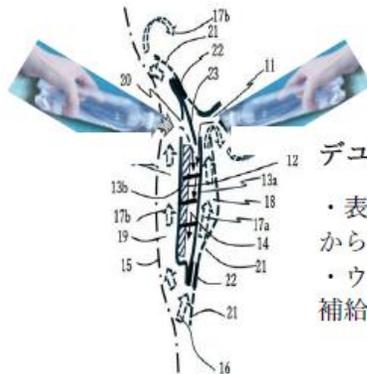
Interior water outlet Front water inlet Removable



Cooling Wear can be comfortably worn underneath the traditional UAE Kandura.



Dual water injection System



Evaporative Cooling + Air-Flow System



Reference 1 ; Details of the Exclusive Patent Rights

We will transfer (sell) 20-year exclusive rights for the six GCC countries to the UAE.

→ This enables the UAE to take full leadership in Middle Eastern heat-safety initiatives.

UAE (Exclusive License Holder)

- └ Saudi Arabia
- └ Qatar
- └ Kuwait
- └ Bahrain
- └ Oman

Confidentiality



Global warming cannot be stopped!

Throw it away during the scorching heat of summer to prevent heat stress outdoors!

New Product

coolbit W cool CAP

Patent/design right pending

A new cooling cap that cools the entire back of the head and the back of the neck at the same time

The cap has a water injection pocket at the top that can be filled with cold water from a plastic bottle! The evaporation effect of the special highly absorbent fiber inside keeps you cool for a long time!

Just inject 50ml of cold water at a time! The cooling water flows and penetrates all the way to the bottom of the flap!



You can stay cool anywhere, anytime!

Product name: coolbit Water in Cap
Product number: CBWCP-SLV
Price: quote required

The cooling effect is obvious at a glance! 10°C or more!



Coolbit Water Injection Cap Cooling Effect Graph

Even if the surface of the top of the hat reaches nearly 50°C outdoors in midsummer, the temperature of the underside of the cooling part remains at 30-35°C.

Red: Temp of the top of the cap
Blue: Temp of the back of cap and flap

Inject 50ml of cold water from a plastic bottle at a time, and the patented cooling structure allows the cold water to penetrate evenly, providing a cool feeling from the back of the head to the upper neck for 2-3 hours!



Water filling pocket on top of the cap



100% silver vapor-deposited polyester that reflects sunlight

Water flow from the back of the water injection pocket

Cooling part seen from the back

Patented Structure: Water injection Pocket Space

Heat Escapes Outside

① Outer Fabric
② Breath Fabric
③ Mesh Fabric
④ Special Absorb F

KOBAYA Co Ltd 3DG 13 Water x HealthCare

TEL: +8154-625-0839

<https://www.kobaya-co.jp>

www.coolbit.jp

WxHMA Free APP

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(12) 特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関 国際事務局

(43) 国際公開日 2025年6月19日(19.06.2025)




(10) 国際公開番号 **WO 2025/126539 A1**

(51) 国際特許分類: A42B 1/008 (2021.01) A42B 1/24 (2021.01) 静岡県焼津市すみれ台二丁目1-3 (JP), 中島信一郎(Nakajima Shinichirou); 〒1250052 東京都葛飾区柴又1丁目4-0番5号 (JP).

(21) 国際出願番号: PCT/JP2024/024792

(22) 国際出願日: 2024年7月9日(09.07.2024)

(25) 国際出願の言語: 日本語

(26) 国際公開の言語: 日本語

(30) 優先権データ: 特願 2023-212228 2023年12月15日(15.12.2023) JP

(71) 出願人: 株式会社日産発明ガッラー (NICHYOU HATSUMEI GALLERY CO., LTD.) [JP/JP]; 〒4250053 静岡県焼津市すみれ台二丁目1-1番3号 (JP).

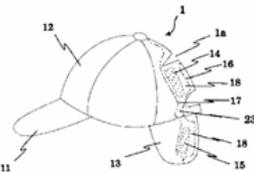
(72) 発明者: 小林 豊博(KOBAYASHI TOYOHIRO); 〒4250053 静岡県焼津市すみれ台二丁目1-1-3 (JP), 山田 明子(Yamada Akiko); 〒4250053

(81) 指定国(表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, GN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) 指定国(表示のない限り、全ての種類の広域保護が可能): ARIPO(BW, CV, GH, GM, KE, LR, LS,

(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

Reference 2 Production & Supply Model (Vietnam / Japan)

Dedicated coolbit production facility in Ho Chi Minh City, Vietnam.

KOBAYA (Japan)

- | Technology transfer
- ▼ Vietnam/ (India) (Low-cost production)
- | Mass production & stable supply
- ▼ UAE (Middle East hub)
- | Regional deployment
- ▼ Supply to all GCC countries



■ Coolbit will be promoted directly by us in Japan, the US, and China, EU and India will be developed through partner companies.

★ Additional domestic partner factories available.

