



Australian Government
IP Australia

CERTIFICATE OF GRANT

STANDARD PATENT

2011232222

I, Celia Poole, the Commissioner of Patents, certify that the following are the particulars of this patent appearing in the Register of Patents:

Name and Address of Patentee(s):

Sun Solutions Ltd.

CHANG Ho Chang 5C Lianhua Plaza, Ethugn Road, Chang-an Dongguan, Guangdong, 523850
China

Name of Actual Inventor(s):

Chang, Ho Chang

Title of Invention:

Cap for mineral water spraying bottle and multifunctional mineral water spraying bottle with the same

Term of Patent:

Twenty years from 10 January 2011

Priority Details

Number
201010133373.8

Date
26 March 2010

Filed with
CN



Dated this 13th day of March 2014

Celia Poole
Commissioner of Patents



Office de la propriété
Intellectuelle
du Canada

Un organisme
d'Industrie Canada

Canadian
Intellectual Property
Office

An Agency of
Industry Canada

Brevet canadien / Canadian Patent

Le commissaire aux brevets a reçu une demande de délivrance de brevet visant une invention. L'adite requête satisfait aux exigences de la *Loi sur les brevets*. Le titre et la description de l'invention figurent dans le résumé descriptif, dont une copie fait partie intégrante du présent document.

Le présent brevet confère à son titulaire et à ses représentants légaux, pour une période expirant vingt ans à compter de la date du dépôt de la demande au Canada, le droit, la faculté et le privilège exclusif de fabriquer, construire, exploiter et vendre à d'autres, pour qu'ils l'exploitent, l'objet de l'invention, *sau^f jugeant en l'espèce* rendu par un tribunal compétent, et sous réserve du paiement des taxes périodiques.

The Commissioner of Patents has received a petition for the grant of a patent for an invention. The requirements of the *Patent Act* have been complied with. The title and a description of the invention are contained in the specification, a copy of which forms an integral part of this document.

The present patent grants to its owner and to the legal representatives of its owner, for a term which expires twenty years from the filing date of the application in Canada, the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used, subject to adjudication before any court of competent jurisdiction, and subject to the payment of maintenance fees.



BREVET CANADIEN

2,784,282

CANADIAN PATENT

Date à laquelle le brevet a été accordé et délivré

2015/06/23

Date on which the patent was granted and issued

Date du dépôt de la demande

2011/01/10

Filing date of the application

Date à laquelle la demande est devenue accessible au public pour consultation

2011/09/29

Date on which the application was made available for public inspection

Commissaire aux brevets / Commissioner of Patents

Canada

2016/01/06/15/14

OPI C I P O

证书号第1345028号



发明专利证书

发明名称：一种喷雾矿泉水瓶盖及其构成的多功能喷雾矿泉水瓶

发明人：张长和

专利号：ZL 2010 1 0510654.0

专利申请日：2010年10月19日

专利权人：(文莱)希米亚股份有限公司东莞代表处

授权公告日：2014年02月12日

本发明经过本局依照中华人民共和国专利法进行审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为二十年，自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费。本专利的年费应当在每年10月19日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

专利证书记载专利权登记时的法律状况、专利权的转移、质押、无效、终止、恢复和专利权人的姓名或名称、国籍、地址变更等事项记载在专利登记簿上。



局长
申长雨

申长雨



第二代法国



inpi
INSTITUT NATIONAL
DE LA PROPRIÉTÉ
INDUSTRIELLE

Certificat d'utilité

Code de la propriété intellectuelle - Livre VI

DÉCISION DE DÉLIVRANCE

Le Directeur général de l'Institut national de la propriété industrielle décide que le certificat d'utilité n° 11 53405 dont le texte ci-annexé est délivré à :

SUN SOLUTIONS LTD

La délivrance produit ses effets pour une période de six ans à compter de la date de dépôt de la demande, sous réserve du paiement des redevances annuelles.

Mention de la délivrance est faite au Bulletin officiel de la propriété industrielle n° 12/43 du 26.10.12 (n° de publication : 906 132).

Fait à Paris, le 26.10.12

Le Directeur général de l'Institut national
de la propriété industrielle

Yves LAPORTE

BUNDESREPUBLIK DEUTSCHLAND

URKUNDE

über die Eintragung des

Gebrauchsmusters

Nr. 20 2011 000 370.1

IPC

B65D 47/26 (2006.01)

Bezeichnung

Sprühnebelmineralwasser-Flaschenverschluss und mehrfunktionale Sprühnebel-Mineralwasserflasche

Gebrauchsmusterinhaber

Sun Solutions Ltd., Dongguan, Guangdong, CN

Tag der Anmeldung

17.02.2011

Tag der Eintragung

14.04.2011

Priorität

19.10.2010 CN 201010510654.0

Die Präsidentin des Deutschen Patent- und Markenamts

Rudolf-Schäffer

Rudolf-Schäffer



Ministero dello Sviluppo Economico
Direzione generale per la lotta alla corruzione
Ufficio Italicum - Brevetti e Marchi

ATTESTATO DI BREVETTO PER INVENZIONE INDUSTRIALE

N. 0001405641

Il presente brevetto viene concesso per l'invenzione della domanda sotto specificata:

num. domanda	anno	C.C.I.A.A.	data pres. domanda	classifica
0000074	2011	UDINE	19/05/2011	B65D39 00

TITOLARE/I SUN SOLUTIONS LTD.
GUANGDONG CINA

MANDATARIO CRAGNOLINI SERGIO

INDIRIZZO ALL STUDIO
VIALE VENEZIA 277
33100 UDINE

TITOLO TAPPO SPRAY PER BOTTIGLIA D' ACQUA MINERALE E BOTTIGLIA D'
ACQUA MINERALE SPRAY MULTIFUNZIONALE

INVENTORE/I CHANG CHANG HO

PRIORITA' CINA, DERIVA DA UNA DOMANDA DI BREVETTO D'INVENZIONE
N. 201010510654.0 DEL 19/10/2010

Si attesta essere
copia conforme
all'originale

Udine, 25 FEB. 2014

Il Funzionario Delegato



Sabina Signorino



Roma, 17/01/2014

意大利領事館



IL DIRIGENTE
Dr.ssa Loredana Guglielmetti



実用新案登録証

(CERTIFICATE OF UTILITY MODEL REGISTRATION)

登録第 3169613 号

(REGISTRATION NUMBER)

考案の名称
(TITLE OF THE DEVICE)

噴霧式ミネラルウォーター瓶蓋および多機能の
噴霧式ミネラルウォーター瓶

実用新案権者
(OWNER OF
THE UTILITY MODEL RIGHT)

中華人民共和国、グゥアンドン、ドングゥアン、
チャンーアン タウン、アルファン ロード、
リィエンファ ブラザ、ジンリイエンシュエン
5 シー
国籍 中華人民共和国
サン ソリューションズ リミテッド

考案者
(CREATOR OF DEVICE)

チャンホー、チャン

出願番号
(APPLICATION NUMBER)

実願2011-001077

出願日
(FILING DATE)

平成23年 3月 1日 (March 1, 2011)

登録日
(REGISTRATION DATE)

平成23年 7月20日 (July 20, 2011)

この考案は、登録するものと確定し、実用新案原簿に登録されたことを証する。
(THIS IS TO CERTIFY THAT THE UTILITY MODEL IS REGISTERED ON THE REGISTER OF THE JAPAN PATENT OFFICE.)

平成23年 7月20日 (July 20, 2011)

特許庁長官
(COMMISSIONER, JAPAN PATENT OFFICE)

岩井良行





실용신안등록증

CERTIFICATE OF UTILITY MODEL REGISTRATION

등록 제 20-0474294 호

(REGISTRATION NUMBER)

출원번호
(APPLICATION NUMBER)

제 2012-7000042 호

출원일
(FILING DATE:YY/MM/DD)

2012년 07월 27일

등록일
(REGISTRATION DATE:YY/MM/DD)

2014년 08월 28일

고안의 명칭 (TITLE OF THE DEVICE)

분무 광천수병 마개 및 이로 구성된 다기능 분무 광천수병

실용신안권자 (OWNER OF THE UTILITY MODEL RIGHT)

썬 솔루션즈 엘티디.

중국 523850 장동 장안 동관 열환 로드 리안후아 플라자 5층/
장호장

고안자 (DEVISER)

장호장

중국 523850 장동 장안 동관 열환 로드 리안후아 플라자 5층

위의 고안은 「실용신안법」에 따라 실용신안등록원부에 등록되었음을 증명합니다.

(THIS IS TO CERTIFY THAT THE DEVICE IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2014년 08월 28일



특허청장 김영

COMMISSIONER, THE KOREAN INTELLECTUAL PROPERTY OFFICE



연차등록료는 2017년부터 매년 08월 28일까지 납부하여야 하며, 등록원부로 권리관계를 확인바랍니다.



TÍTULO DE PATENTE NO. 339679

Titular(es): SUN SOLUTIONS LTD.
Domicilio: Jinlianxuan 5C, Lianhua Plaza, Erhuan Road, Chang-an Town, Dongguan, Guangdong, REPÚBLICA POPULAR DE CHINA
Denominación: UNA TAPA ATOMIZADORA DE BOTELLA DE AGUA MINERAL Y UNA BOTELLA ATOMIZADORA MULTIFUNCIONAL DE AGUA MINERAL
Clasificación: Int.Cl.8: B05B1/02; B05B11/00
Inventor(es): CHANG HO CHANG

SOLICITUD

Número:
MX/a/2011/008374

Fecha de presentación:
9 de agosto de 2011

Horas:
13:14

País:
CN

PRIORIDAD
Fecha:
19 de octubre de 2010

Número:
CN 201010510654.0

Vigencia: Veinte años

Fecha de Vencimiento: 9 de agosto de 2031

La patente de referencia se otorga con fundamento en los artículos 1º, 2º fracción V, 8º fracción III, y 59 de la Ley de la Propiedad Industrial. De conformidad con el artículo 23 de la Ley de la Propiedad Industrial, la presente patente tiene una vigencia de veinte años ininterrumpibles, contada a partir de la fecha de presentación de la solicitud y estará sujeta al pago de la tasa para mantener vigentes los derechos.

Quién suscribe el presente título lo hace con fundamento en lo dispuesto por los artículos 6º fracciones III y 7º del 2º de la Ley de la Propiedad Industrial (Diario Oficial de la Federación (D.O.F.) 27/06/1991, reformado el 02/08/1994, 25/12/1995, 26/12/1997, 17/05/1998, 26/01/2004, 18/06/2005, 25/01/2006, 06/05/2009, 08/05/2010, 18/06/2010, 26/06/2010, 27/01/2012 y 09/04/2012), artículos 9º, 2º fracción V, 1º, 4º y 12º fracciones II y III del Reglamento del Instituto Mexicano de la Propiedad Industrial (D.O.F., 14/12/1998, reformado el 01/07/2002, 10/07/2004, 20/07/2004 y 7/09/2007); artículos 11, 3º, 4º, 6º fracción V inciso a), 18º fracciones I y III y 33 del Estatuto Orgánico del Instituto Mexicano de la Propiedad Industrial (D.O.F. 27/12/1999, reformado el 18/03/2002, 29/07/2004, 04/08/2004 y 13/09/2007); 1º, 3º y 5º inciso a) del Acuerdo que otorga facultades en los Directores Generales Adjuntos, Coordinadores, Direcciones Divisionales, Titulares de las Oficinas Regionales, Subdirectores, Subcoordinadores, Coordinadores Departamentales y Oficinas Subalternas del Instituto Mexicano de la Propiedad Industrial (D.O.F. 15/12/1999, reformado el 04/02/2000, 29/07/2004, 04/08/2004 y 13/09/2007).

Fecha de expedición: 3 de junio de 2016

LA DIRECTORA DIVISIONAL DE PATENTES

NAHANNY CANAL REYES





INTELLECTUAL
PROPERTY
OFFICE

LETTERS PATENT

Number 600878

ELIZABETH THE SECOND, by the Grace of God Queen of New Zealand and Her Other Realms and Territories, Head of the Commonwealth, Defender of the Faith; To all to whom these presents shall come, Greeting:

WHEREAS pursuant to the Patents Act 1953 an application has been made for a patent of an invention for

A cap of spray mineral water bottle and multifunctional spray mineral water bottle

(more particularly described in the complete specification relating to the application)

AND WHEREAS

Sun Solutions Ltd., 5C Lianhua Plaza, Erhuan Road, Chang-an Dongguan, Guangdong 523850, Australia

(hereinafter together with his or their successors and assigns or any of them called "the patentee") is entitled to be registered as the proprietor of the patent hereinafter granted:

Address for service: A.P.T. Patent and Trade Mark Attorneys, PO Box 2816, Wellington, New Zealand

NOW, THEREFORE, We by these letters patent give and grant to the patentee our special licence, full power, sole privilege, and authority, that the patentee by himself, his agents, or licensees and no others, may subject to the provisions of any statute or regulation for the time being in force make, use, exercise and vend the said invention within New Zealand and its dependencies during a term of twenty years from 10 January 2011 and that the patentee shall have and enjoy the whole profit and advantage from time to time accruing by reason of the said invention during the said term:

AND WE strictly command all our subjects whomsoever within New Zealand and its dependencies that they do not at any time during said term either directly or indirectly make use of or put into practice the said invention, nor in any way imitate the said invention without the consent, licence, or agreement of the patentee in writing under his hand, on pain of incurring such penalties as are prescribed by law and of being answerable to the patentee according to law for his damages thereby occasioned:

PROVIDED ALWAYS:

- (1) That these letters patent shall determine and become void if the patentee does not from time to time pay the renewal fees prescribed by law in respect of the patent;
- (2) That these letters patent are revocable on any of the grounds prescribed by the Patents Act 1953 as grounds for revoking letters patent;
- (3) That nothing in these letters patent shall prevent the granting of licences in the manner in which and for the considerations on which they may by law be granted;
- (4) That these letters patent shall be construed in the most beneficial sense for the advantage of the patentee.

IN WITNESS whereof We have caused these letters patent to be signed and sealed on 1 August 2014 with effect from 10 January 2011.

Mandy McDonald
Commissioner of Patents, Trade Marks, and Designs



Republic of the Philippines



INTELLECTUAL PROPERTY
PHILIPPINES
BUREAU OF PATENTS

Patent No. 1-2012-501627

Having complied with the provisions of Republic Act No. 8293 and its regulations, this Office grants **LETTERS PATENT** for an

INVENTION

the pertinent data, specification and claim/s of which are hereunto annexed and made part hereof.

Now, therefore, this **LETTERS PATENT** grants unto its owner/s the exclusive right throughout the Philippines to make, use, sell or import the invention and where the invention is or includes a process, including the product obtained directly or indirectly from such process; and,

Unless sooner terminated as provided for by law and the regulations, the term of this **LETTERS PATENT** shall be **TWENTY (20) YEARS** from the date of filing.

IN WITNESS WHEREOF, I have hereunto affixed my hand and the seal of the Intellectual Property Office at Taguig City, Philippines



The signature of Epiifanio M. Evasco, Director of Patents, written in blue ink.
EPIFANIO M. EVASCO
Director of Patents

РОССИЙСКАЯ ФЕДЕРАЦИЯ

ДУБЛИКАТ



ПАТЕНТ

НА ПОЛЕЗНУЮ МОДЕЛЬ

№ 136027

**РАСПЫЛЯЮЩАЯ КРЫШКА БУТЬЛКИ ДЛЯ
МИНЕРАЛЬНОЙ ВОДЫ И МНОГОФУНКЦИОНАЛЬНАЯ
РАСПЫЛЯЮЩАЯ БУТЬЛКА ДЛЯ МИНЕРАЛЬНОЙ
ВОДЫ С ТАКОЙ КРЫШКОЙ**

Патентообладатель(ли): **САН СОЛЮШЕНС ЛТД. (CN)**

Автор(ы): **ЧАН Хо Чан (CN)**

Заявка № 2012128974

Приоритет полезной модели **26 марта 2010 г.**

Зарегистрировано в Государственном реестре полезных моделей Российской Федерации **27 декабря 2013 г.**

Срок действия патента истекает **10 января 2021 г.**

Дубликат выдан Федеральной службой
по интеллектуальной собственности **15.08.2014**

И.о. руководителя

Л.Л. Кирий





THE REGISTRY OF PATENTS
SINGAPORE

THE PATENTS ACT
(CHAPTER 221)

CERTIFICATE OF GRANT OF PATENT

In accordance with section 35 of the Patents Act, it is hereby certified that a patent has been granted in respect of an invention having the following particulars:

Title : CAP FOR MINERAL WATER SPRAYING BOTTLE AND MULTIFUNCTIONAL MINERAL WATER SPRAYING BOTTLE WITH THE SAME

Application Number : 2012054219

Patent Number : 183112

Date of Filing : 10 JANUARY 2011

Priority Data : 26 MARCH 2010 - PATENT APPLICATION NO. 201010133373.8 (CHINA)

Name of Inventor(s) : CHANG, HO CHANG

Name(s) and Address(es) of Proprietor(s) of Patent : MIST20 (HK) LIMITED
C127, JIAZHOU YUAN,
XIAOBIAZHONGHUIXINCHENG,
CHANGAN TOWN, DONGGUAN CITY,
GUANGDONG PROVINCE, P.R.
CHINA

Date of Grant : 16 September 2014

Dated this 16th day of September 2014

Tan Yih San
Registrar of Patents
Singapore

Nº SOLICITUD 201131224
Nº PUBLICACIÓN ES2422132
TITULAR/ES
SUN SOLUTIONS LTD.

FECHA EXPEDICIÓN 15/10/2014

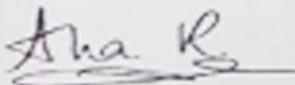
CERTIFICADO-TÍTULO
DE
PATENTE DE INVENCIÓN

Cumplidos los requisitos previstos en la vigente Ley 11/1996, de 20 de Marzo, de Patentes, se expide el presente CERTIFICADO-TÍTULO, acreditativo de la concesión de la Patente de Invención. Ha sido tramitada y concedida con realización del Informe sobre el Estado de la Técnica y sin examen previo de los requisitos sustantivos de patentabilidad.

Se otorga al titular un derecho de exclusiva en todo el territorio nacional, bajo las condiciones y con las limitaciones previstas en la Ley de Patentes. La duración de la patente será de veinte años contados a partir del 18/07/2011.

La patente se concede sin perjuicio de tercero y sin garantía del Estado en cuanto a la validez y a la utilidad del objeto sobre el que recae.

Para mantener en vigor la patente concedida, deberán abonarse las tasas anuales establecidas, que se pagarán por años adelantados. Asimismo, deberá explotarse el objeto de la invención, bien por su titular o por medio de persona autorizada de acuerdo con el sistema de licencias previsto legalmente, dentro del plazo de cuatro años a partir de la fecha de solicitud de la patente, o de tres años desde la publicación de la concesión en el Boletín Oficial de la Propiedad Industrial.



Fdo.: Ana María Redondo Minguez
El Director del Departamento de Patentes e Información Tecnológica
P.D. El Jefe/a de Servicio de Actuaciones Administrativas



中華民國專利證書

發明第 1566993 號

發明名稱：噴霧瓶裝水瓶蓋

專利權人：張長和

發明人：張長和

專利權期間：自 2017 年 1 月 21 日至 2034 年 10 月 23 日止

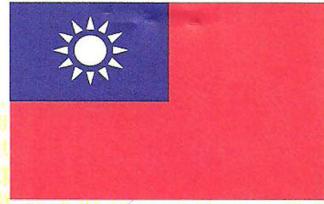
上列證明是經專利權人依專利法之規定取得專利權

特此證明

洪淑敏



二零一七年一月二十日



中華民國專利證書

新型第 M 410720

四

新 型 名 稱：噴霧礦泉水瓶蓋及其構成之多功能噴霧礦泉水瓶

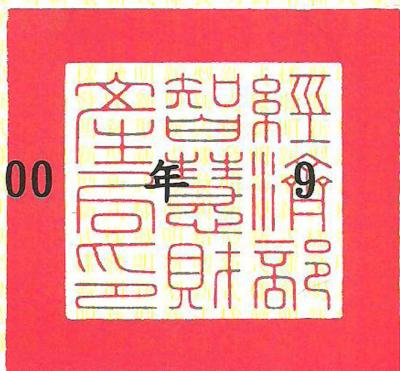
專利權人
創 作 人

專利權期間：自2011年9月1日至2020年12月1日止

上開新型業依專利法規定通過形式審查取得專利權
行使專利權依法應提示新型專利技術報告進行警告
經濟部智慧財產局

美花王長局

中華民國一百零九年五月一日





ເລກທີ່ບໍນມື້ງວິປະກາ 8356

ฉบับ/200 - ๗

อนุสิทธิบัตร

อาศัยอำนาจตามความในพระราชบัญญัติสิทธิบัตร พ.ศ. 2522

๔๙ ไข้เพิ่มเติมโดยพระราชนูญติสิทธิบัตร (ฉบับที่ 3) พ.ศ. 2542

๑๖) ภาระทรัพย์สินทางปัจจุบันของนิติบุคคลนี้ให้แก่

พืช ไม้ดอก พืชประดับ

หัวข้อการประดิษฐ์ตามรายละเอียดการประดิษฐ์ ข้อดีอสิกธิ และรูปเขียน (ต่อ)
กิจกรรมในอนุสิกขินบัตร

1203001941

หน้า ๑๙ จาก ๒๓ | วันที่ ๒๖ พฤษภาคม ๒๕๖๔

Digitized by srujanika@gmail.com

วิจัยและพัฒนา สถาบันวิจัยและพัฒนาฯ

ให้ทั้งหมด จึงเป็นภารกิจที่ต้องมีความต่อเนื่องด้วยความตั้งใจและมุ่งมั่น

๘๙๐๙๙ ๒๖ ๑๗๙๔ ๓๕๕

9 12/2011 10:59 AM 10550 10550

A circular stamp of the Royal Thai Police, featuring the text "DEPARTMENT OF POLICE" around the perimeter and "THE ROYAL THAI POLICE" in the center. A handwritten signature is placed over the stamp.

พ.ศ.๒๕๖๔

- ผู้ควบคุมบริษัทให้การฟ้องเรียกร้องค่าธรรมเนียมรายวันเริ่มต้นที่ ๕ ของจำนวนเงินที่ได้รับนั้น ทุกเดือนบวกเพิ่มอีก
 - ผู้ควบคุมบริษัทจัดซื้อจัดจ้างซึ่งรายการใดๆ ก็ตามที่ได้รับการอนุมัติในทราบเห็นชอบ
 - ภายใน ๙๐ วันก่อนวันที่มีผลกฎหมายให้ใช้บังคับ ผู้ควบคุมบริษัทมีอำนาจตัดสินใจด้วยวิธีประพาทได้ ๒ ทาง ไม่ว่าจะด้วยกรรมสิทธิ์ ๑ ในส่วนที่ต้องดำเนินการ
 - การอนุมัติให้ใช้อำนาจดูแลบริษัทโดยไม่ต้องได้รับการอนุมัติเมื่อต้องดำเนินการด้วยเหตุผลใดๆ



Intellectual
Property
Office

Certificate of Grant of Patent

Patent Number: **GB2484757**

Proprietors: Sun Solutions Limited.

Inventors: Chang Ho Chang

This is to Certify that, in accordance with the Patents Act 1977,

a Patent has been granted to the proprietor for an invention entitled
**"A cap of spray mineral water bottle and multifunctional spray
mineral water bottle"** disclosed in an application filed **17.02.2011**.

Dated 24.09.2014

John Alty

Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office

The attention of the Proprietor(s) is drawn to the important notes overleaf.



US009649649B2

(12) **United States Patent**
Chang

(10) **Patent No.:** US 9,649,649 B2
(b) **Date of Patent:** May 16, 2017

(54) **SPORT-TYPE MULTIFUNCTIONAL SPRAY MINERAL WATER BOTTLE**

(71) **Applicant:** Sun Solutions LTD., Guangdong (CN)

(72) **Inventor:** Chang Hs Chang, Taoyuan (TW)

(73) **Assignee:** Sun Solutions LTD., Dongguan (CN)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 14/518,827

(22) **Filed:** Oct. 28, 2014

(65) **Prior Publication Data**

US 2015/0034739 A1 Feb. 5, 2015

Related U.S. Application Data

(60) Division of application No. 12/912,426, filed on Oct. 26, 2010, now Pat. No. 9,227,210, which is a continuation-in-part of application No. 12/696,047, filed on Jan. 28, 2010, now abandoned, and a continuation-in-part of application No. 12/757,202, filed on Apr. 9, 2010, now Pat. No. 8,662,419.

(30) **Foreign Application Priority Data**

Oct. 19, 2010 (CN) 2010 1 0510654

(51) **Int. CL**

B65D 1/32 (2006.01)
B65B 11/00 (2006.01)
B65D 47/26 (2006.01)
B65D 47/30 (2006.01)
B65B 1/02 (2006.01)

(52) **U.S. Cl.**

CPC B65B 11/0032 (2013.01); B65B 1/02 (2013.01); B65B 11/0089 (2013.01); B65D 47/263 (2013.01); B65D 47/305 (2013.01)

(58) **Field of Classification Search**

CPC B65B 11/0032; B65B 11/0089; B65D 47/305; B65D 47/263

USPC 222/206, 209, 211, 215, 239/463, 469, 239/470, 487, 488, 327, 215/235, 236, 215/244

See application file for complete search history.

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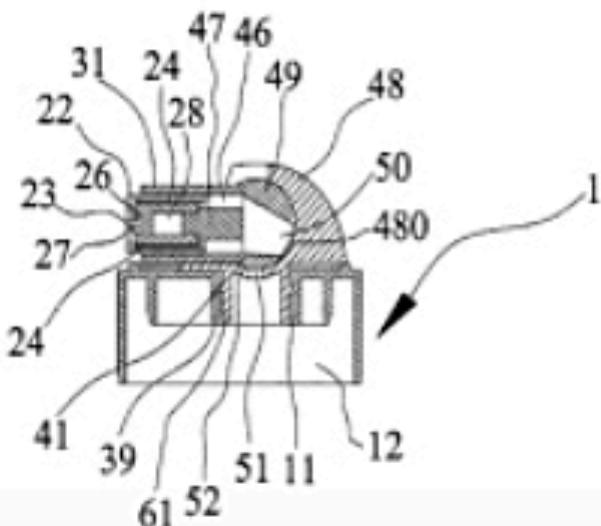
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Primary Examiner — Jason Boeckmann

ABSTRACT

The invention discloses a cap of spray mineral water bottle, including cap body, spray means and water locking means. This cap of spray mineral water is used with resilient mineral water bottle body to form a multifunctional spray mineral water bottle, which can ensure normal drinking of mineral water as well as carry out spray drinking of water by means of squeezing the bottle body to transform bottle body and increase the pressure inside the bottle, thus making water to enter inlet from the outlet of water locking means on the cap, and to enter the atomizing channel through the water channel, finally to be sprayed from the spray aperture. Furthermore, in the open air or in the dusty and hot environment, you can place the mineral water bottle upside down, put the nozzle to face your body or surrounding, and squeeze the bottle body to spray, thus reducing surrounding temperature, as well as subsiding dust by combining dust and spray to make you feel cool, fresh and comfortable.

10 Claims, 15 Drawing Sheets





US09227210B2

(12) **United States Patent**
Chang

(54) **CAP OF SPRAY MINERAL WATER BOTTLE AND MULTIFUNCTIONAL SPRAY MINERAL WATER BOTTLE**

(75) Inventor: **Chang Ho Chang, Taoyuan (TW)**

(73) Assignee: **Sun Solutions LTD., Guangdong (CN)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1029 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/912,426**

(22) Filed: **Oct. 26, 2010**

(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation-in-part of application No. 12/696,047, filed on Jan. 28, 2010, now abandoned, and a continuation-in-part of application No. 12/757,202, filed on Apr. 9, 2010, now Pat. No. 8,662,419.

(30) **Foreign Application Priority Data**

Oct. 19, 2010 (CN) 2010 1 0510654

(51) **Int. CL**

B65D 1/32 (2006.01)
 B65B 11/00 (2006.01)
 B65D 47/26 (2006.01)
 B65D 47/30 (2006.01)
 B65B 1/02 (2006.01)

(52) **U.S. CL**

CPC B05B 11/0032 (2013.01); B05B 1/02 (2013.01); B05B 11/0089 (2013.01); B65D 47/263 (2013.01); B65D 47/305 (2013.01)

(10) **Patent No.:** **US 9,227,210 B2**
(45) Date of Patent: ***Jan. 5, 2016**

(58) **Field of Classification Search**
 CPC B65D 47/305; B65D 47/263; B65D 2547/063; B65D 1/32
 USPC 239/437, 581, 1, 463, 468, 469,
 239/471-473, 487, 488, 490; 222/153.11,
 222/548

See application file for complete search history.

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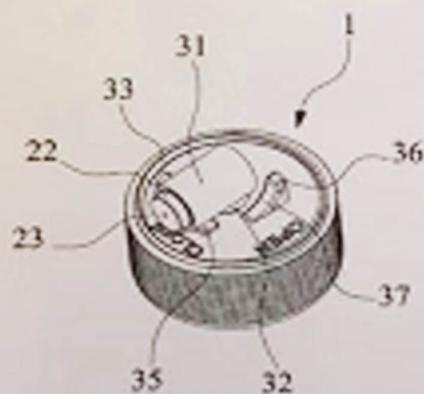
Primary Examiner — Jason Boeckmann

(74) **Attorney, Agent, or Firm** — Garcia-Zamor IP Law, Ruy M. Garcia-Zamor

(57) **ABSTRACT**

The invention discloses a cap of spray mineral water bottle, including cap body, spray means and water locking means. This cap of spray mineral water is used with resilient mineral water bottle body to form a multifunctional spray mineral water bottle, which can ensure normal drinking of mineral water as well as carry out spray drinking of water by means of squeezing the bottle body to transform bottle body and increase the pressure inside the bottle, thus making water to enter inlet from the outlet of water locking means on the cap, and to enter the atomizing channel through the water channel, finally to be sprayed from the spray aperture. Furthermore, in the open air or in the dusty and hot environment, you can place the mineral water bottle upside down, put the nozzle to face your body or surrounding, and squeeze the bottle body to spray, thus reducing surrounding temperature, as well as subduing dust by combining dust and spray to make you feel cool, fresh and comfortable.

8 Claims, 10 Drawing Sheets





BẰNG ĐỘC QUYỀN GIẢI PHÁP HỮU ÍCH

Số: 1482

Tên sáng chế:

NẤP CHAI NUOC KHOANG CÓ VỎ PHUN VÀ CHAI NUOC KHOANG ĐA
CHỨC NĂNG SỬ DỤNG NẤP NÀY

Chủ Bằng độc quyền:

SUN SOLUTIONS LTD. (CN)

Tác giả:

CHANG, Ho Chang (CN)

Số đơn:

2-2012-00157

Ngày nộp đơn:

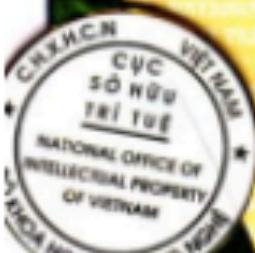
10.01.2011

Số điểm yêu cầu bảo hộ: 22

Số trang mô tả: 27

Cấp theo Quyết định số: 3116/QĐ-SHTT, ngày: 17.01.2017

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KT. CỤC TRƯỞNG
PHÓ CỤC TRƯỞNG

Phan Ngan Son

