



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
04.05.2016 Bulletin 2016/18

(51) Int Cl.:
B65B 69/00 (2006.01) A45B 25/28 (2006.01)

(21) Application number: **13887885.5**

(86) International application number:
PCT/KR2013/008086

(22) Date of filing: **06.09.2013**

(87) International publication number:
WO 2014/208815 (31.12.2014 Gazette 2014/53)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(72) Inventor: **Won, Young Gil**
Siheung-si, Gyeonggi-do 15050 (KR)

(74) Representative: **Patentanwälte ter Smitten Eberlein Rütten Partnerschaftsgesellschaft**
Burgunderstraße 29
40549 Düsseldorf (DE)

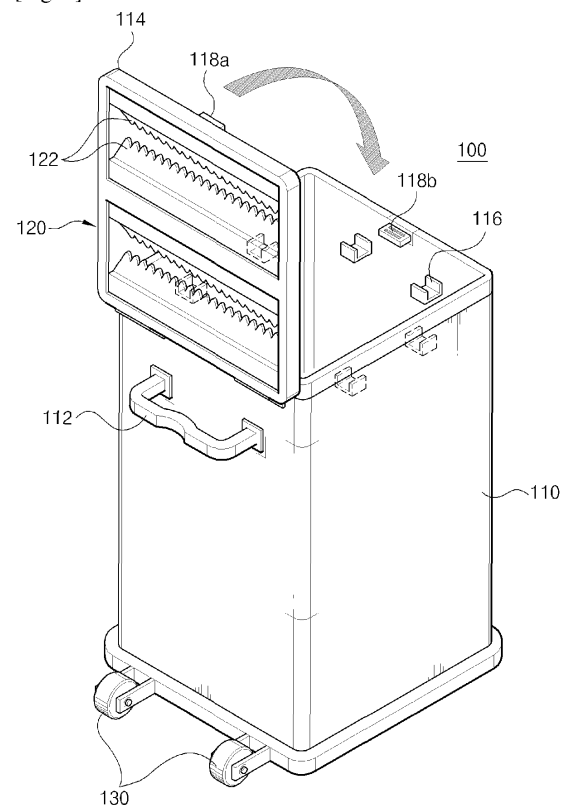
(30) Priority: **28.06.2013 KR 20130075467**

(71) Applicant: **Won, Young Gil**
Siheung-si, Gyeonggi-do 15050 (KR)

(54) **APPARATUS FOR RECOVERING UMBRELLA PLASTIC BAG**

(57) The present invention enables a plastic bag cover to be easily removed from an umbrella by applying pressure to the lateral sides of the umbrella via a stopper, enables plastic bags that have covered umbrella of various sizes to be recovered, and collects umbrella-covering plastic bags that have been removed from umbrellas, thereby allowing the plastic bags to be easily discarded.

[Fig. 1]



Description

Technical Field

[0001] The present invention relates to an apparatus for recovering plastic bags for umbrellas, and in particular, to an apparatus for recovering plastic bags for umbrellas, which makes it possible to recover plastic bags for covering umbrellas, irrespective of umbrella size.

Background Art

[0002] In general, unspecified numbers of people frequently enter and exit venues such as department stores, theaters, and banks and enter carrying umbrellas when it is raining. Large amounts of rainwater may fall from umbrellas that people hold onto the floor of a building, contaminating the indoor space. In order to prevent this from occurring, a plastic bag designed to cover the exterior of an umbrella may be distributed to each person holding an umbrella, but this would be very inconvenient. Thus, apparatuses for automatically covering wet umbrellas with plastic bags conveniently and easily are being widely used.

[0003] Wastebaskets are commonly placed next to where the apparatuses for automatically covering umbrellas are installed in order to recover plastic bags which have been used to cover umbrellas. Accordingly, users generally remove the plastic bags used for covering their umbrellas by hand and discard them in the wastebaskets.

[0004] However, since the plastic bags for covering umbrellas which are to be discarded in the wastebaskets are wet with rainwater, users' hands may get wet when removing the plastic bags. In addition, the plastic bags that are discarded in wastebaskets may become mixed with common forms of trash, making recycling work hard. Also wastebaskets have limited capacities, and an overflow of plastic bags may be blown and scattered by wind and contaminate the surroundings.

[0005] In an effort to solve the above mentioned problems, Japanese Patent Application Laid-open Publication No. 08-026232 (January 30, 1996) discloses "an apparatus for removing an umbrella-covering plastic bag".

[0006] The above technology is configured such that when an umbrella is removed from inside a circular elastic plate into which it has been inserted, a plastic bag covering the umbrella is caught on a ridge and removed from the umbrella.

[0007] In the above invention, since a removed umbrella remains caught on the elastic plate, the user needs to pick up the plastic bag and discard it in a wastebasket in person.

[0008] Moreover, since the umbrellas that people use may be used as fashion items, various patterns are formed on the umbrellas. While umbrella sizes vary, the sizes of the elastic plates are fixed. If the diameter of an umbrella is large, the umbrella may not fit into an elastic plate, requiring the recovery of umbrella-covering plastic

bags in such cases to be performed manually by the users.

[0009] Furthermore, users may mistakenly drop plastic bags removed from their umbrellas outside a wastebasket when attempting to discard them. Most users tend to not remedy such situations, and it is thus necessary to clean the area around the wastebasket.

Disclosure of Invention

Technical Problem

[0010] Accordingly, the present invention is made in an effort to solve the above problems. It is an object of the present invention to provide an apparatus for recovering plastic bags for umbrellas which makes it easy to remove a plastic bag covering an umbrella.

[0011] Also, it is another object of the present invention to provide an apparatus for recovering plastic bags for umbrellas which may allow plastic bags covering umbrellas to be recovered even when the umbrellas vary in size.

[0012] In addition, it is a further object of the present invention to provide an apparatus for recovering plastic bags for umbrellas which may allow only plastic bags for covering umbrellas which have been removed from umbrellas to be collected, recovered and recycled.

Technical Solution

[0013] To achieve the above objects, there is provided an apparatus for recovering plastic bags for umbrellas, which is an apparatus for recovering an umbrella-covering plastic bag used to cover an umbrella to prevent rainwater from dropping from the umbrella when it is raining, including: a main body having a space therein; and an umbrella-covering plastic bag recovering unit disposed on the top of the main body and including a pair of stoppers disposed facing each other and spaced apart a certain distance, progressively decreasing from top to bottom, to apply elastic force from both sides of the umbrella when the umbrella is inserted, wherein a plurality of engaging protrusions protrude from ends of the pair of stoppers disposed facing each other.

[0014] There is provided an apparatus for recovering plastic bags for umbrellas which may be further include a collecting bag hanger disposed on an inner side surface of the main body to hang a collecting bag for collecting the umbrella-covering plastic bags which have been recovered.

[0015] The collecting bag hanger may include a plurality of rings disposed on an inner side surface of the main body to face each other.

[0016] The collecting bag hanger may include a plurality of tongs disposed on an inner side surface of the main body to face each other.

[0017] There is provided an apparatus for recovering plastic bags for umbrellas which may be further include a hinged door disposed to be openable and closeable on

the main body to enable the collecting bag to be replaced.

[0018] There is provided an apparatus for recovering plastic bags for umbrellas which may be further include a first magnet attached to one end of the door; and a second magnet attached to a portion corresponding to the first magnet on an upper inner side of the main body.

[0019] The engaging protrusions may be directed, toward an area between the engaging protrusions which face each other.

[0020] The engaging protrusions may be formed in a triangular shape.

[0021] The engaging protrusions may be formed in a trapezoidal shape.

Advantageous Effects

[0022] In the above present invention, a plastic bag can be easily removed from an umbrella by applying pressure toward the lateral sides of an umbrella via a stopper.

[0023] Also, in the present invention, plastic bags covering umbrellas of various sizes can be recovered.

[0024] In addition, in the present invention, plastic bags which are removed from umbrellas can be collected and easily discarded.

Brief Description of Drawings

[0025]

Figure 1 is a perspective view illustrating an exemplary configurative embodiment of an apparatus for recovering plastic bags for umbrellas according to a first aspect of the present invention.

Figure 2 is a cross sectional view illustrating a configuration of the apparatus for recovering plastic bags for umbrellas illustrated in Figure 1.

Figure 3 is a plane view illustrating an exemplary configuration of an umbrella-covering plastic bag recovering unit according to the present invention.

Figure 4 is a plane view illustrating another exemplary configuration of an umbrella-covering plastic bag recovering unit according to the present invention.

Figure 5 is a view illustrating an example of an apparatus for recovering plastic bags for umbrellas being used according to the present invention.

Best modes for carrying out the invention

[0026] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings.

[0027] Figure 1 is a perspective view illustrating an exemplary configurative embodiment of an apparatus for recovering plastic bags for umbrellas according to a first aspect of the present invention, showing a state in which a door is open. Figure 2 is a cross sectional view illustrating a configuration of the apparatus for recovering

plastic bags for umbrellas illustrated in Figure 1.

[0028] Referring to Figures 1 and 2, the apparatus 100 for recovering plastic bags for umbrellas, according to an exemplary embodiment of the present invention, may include, but is not limited to, a main body 110; an umbrella-covering plastic bag recovering unit 120 and moving wheels 130.

[0029] The main body 110 provides a space therein to recover and collect an umbrella-covering plastic bag. The main body 110 is formed in an approximately rectangular shape, but may be formed in various other shapes based on users' needs.

[0030] A handle 112 to set the position of the main body 110 may be disposed at one side of the main body 110.

[0031] A door 114 which can be open by a user's operation may be disposed on the upper portion or on a lateral side of the main body 110.

[0032] The door 114 may be disposed on one surface of the main body 110 and may be openable for maintenance of the inner space of the main body 110, namely, for repairing the inside and collecting recovered plastic bags, etc.

[0033] The door 114 may be configured in various ways based on users' needs, such as in a sliding door configuration or a hinged door configuration. In the present exemplary embodiment, the door 114 is configured in the hinged door configuration. The door 114 is connected through a hinge to the upper portion of the main body 110, or may be disposed at another position based on users' needs.

[0034] In addition, in the present exemplary embodiment, the door 114 may include a first magnet 118a attached to one end of the door 114 so as to maintain a closed state, and a second magnet 118b attached to a portion corresponding to the first magnet 118a at the upper inner side of the main body 110. When the door 114 is closed, the first magnet 118a and the second magnet 118b are adhered to each other by magnetic force, whereupon the closed state of the door 114 may be maintained until a separate external force is applied thereto. In addition, the first magnet 118a and the second magnet 118b are able to prevent the door from opening when an umbrella is inserted and removed so as to recover an umbrella plastic bag.

[0035] In the inner space of the main body 110, a collecting bag hanger 116 may be disposed to hang collecting plastic bags thereon, which is provided for collecting recovered umbrella-covering plastic bags.

[0036] In the present exemplary embodiment, the collecting bag hanger 116 is formed in a ring shape, but may be configured in various other configurations such as a tong shape, based on users' needs or the types of collecting bags.

[0037] The collecting bag hanger 116 may be disposed in plurality on the inner side surfaces of the main body 110 to face each other. The collecting bag hangers 116 may be disposed in various ways based on users' needs,

such as being disposed individually or in plurality on each of the inner sides of the main body 110.

[0038] Figure 3 is a plane view illustrating an exemplary configuration of an umbrella-covering plastic bag recovering unit according to the present invention.

[0039] Referring to Figures 1 and 3, an umbrella-covering plastic bag recovering unit 120 may be disposed on one surface of the main body 110 so as to collect used umbrella-covering plastic bags to thereby prevent rainwater from dropping from the umbrellas. In the present exemplary embodiment, the umbrella-covering plastic bag recovering unit 120 is disposed on the door 114 at an upper portion of the main body 110, but the umbrella-covering plastic bag recovering unit 120 may alternatively be disposed separately from the door 114 based on users' needs. In addition, the umbrella-covering plastic bag recovering unit 120 may be disposed on a lateral surface of the main body 110, if necessary.

[0040] The umbrella-covering plastic bag recovering unit 120 may include a pair of stoppers 122.

[0041] A pair of the stoppers 122 may be disposed as follows.

[0042] A hole of a predetermined shape may be formed on one surface of an outer side of the main body 110, and a pair of the stoppers 122 may be disposed facing each other in the holes.

[0043] While formed in rectangular shapes with each having predetermined width and length, the stoppers 122 may be formed in other shapes provided that they can contact the side surfaces of an umbrella inserted through the spaced gap formed between the stoppers 122.

[0044] While the stoppers 122 are formed facing each other, it is preferred that they are disposed such that the spaced distance therebetween can progressively increase from one end to the other end, in order to correspond to various sizes of umbrellas, so as to recover umbrella-covering plastic bags.

[0045] In addition, a pair of the stoppers 122 which are disposed facing each other are arranged such that the interval therebetween progressively decreases from top to bottom. More specifically, they may be arranged in a $\wedge$ -shape. The lowest portions of the stoppers 122 are spaced apart by a predetermined distance so as to allow plastic bags removed from umbrellas to drop unimpeded into the main body 110.

[0046] It is preferred that a plurality of engaging protrusions 124 protrude at regular intervals from the ends of the mutually facing stoppers 122. In the present exemplary embodiment, the engaging protrusions 124 may be formed in a trapezoid-like quadrangular shape. Here, it is preferred that the engaging protrusions 124 are oriented toward an area between the engaging protrusions 124 protruding from the mutually facing stoppers 122. More specifically, it is preferred that the engaging protrusions 124 and the opposed engaging protrusions 124 are disposed in an alternating manner. If the engaging protrusions 124 and the opposed engaging protrusions 124

are disposed in an alternating manner, durability and elasticity may be maintained when inserting an umbrella in between the stopper 122 and the opposed stopper 122.

[0047] In the present exemplary embodiment, the engaging protrusion 124 has a triangular shape, but may have a trapezoid shape based on user needs.

[0048] Figure 4 is a plane view illustrating another exemplary configuration of an umbrella-covering plastic bag recovering unit according to the present invention, and shows the umbrella-covering plastic bag recovering unit 120 which has a trapezoid-shaped engaging protrusion 125.

[0049] If the engaging protrusion 124 has a triangle shape, the space between the facing engaging protrusions 124 may be formed in a zigzag shape. It is preferred that the spaced-apart distance between the engaging protrusions 124 may be made large enough to easily insert an umbrella.

[0050] The stoppers 122 may include a material having high elasticity, such as rubber. Since the space between the stoppers 122 is narrow, the stoppers 122 may elastically contact the umbrella if an umbrella and the end of the stopper 122 get close to each other.

[0051] In addition, since the stoppers 122 are made of a rubber having high elasticity, an umbrella may be inserted between the stoppers 122 even if the ends of the stoppers 122 are disposed contacting each other.

[0052] If an umbrella which is inserted between the stoppers 122 is covered with a plastic bag, the stoppers 122 which elastically contact the umbrella may elastically contact the plastic bag. Accordingly, after an umbrella covered with a plastic bag is removed after being inserted between the stoppers 122, the umbrella-covering plastic bag is separated from the umbrella with the aid of the stoppers 122.

[0053] The moving wheels 130 are disposed at the lower rear sides of the main body 110 so as to allow easier movement of the main body 110. In the present exemplary embodiment, one moving wheel 130 is disposed at each of both sides of the main body 110; however, more than one moving wheel 130 can be disposed based on users' needs.

[0054] The operation of the constituted present invention as the above will be described below.

[0055] Figure 5 is a view illustrating an example of an apparatus for recovering plastic bags for umbrellas being used according to the present invention, and shows that an umbrella covered with a plastic bag 2 by a user, namely, a non-foldable umbrella which in general is called a 'long umbrella', is being inserted through between a pair of stoppers 122 disposed at the open upper portion of the apparatus 100 for recovering plastic bags for umbrellas.

[0056] Here, since the 'long umbrella' cannot be folded, it has a relatively smaller diameter.

[0057] Figure 3 will be referred to again.

[0058] Referring to Figure 3, it is possible that, after inserting an umbrella into a space between stoppers 122,

a user can move the umbrella to a random position or be inserted into a place which fits with the diameter of the umbrella during the initial insertion. In here, since the user's umbrella has a relatively small diameter, the position is shown to be the place where the side surfaces of the umbrella 1 contact the stoppers 122.

[0059] In a state in which the umbrella is inserted, when the user pulls the umbrella 1, the umbrella-covering plastic bag 2 is hooked by the stoppers 122 and removed from the umbrella 1.

[0060] Subsequently, the umbrella-covering plastic bag 2 which has been removed from the umbrella will drop into a collecting bag 3 hung on the bag hanger 116 inside the main body 110 to be easily collected.

[0061] On the other hand, a user may often use an umbrella of which the diameter is relatively larger. More specifically, an umbrella which folds in two or three stages is called a 'short umbrella', and the diameter thereof when folded is relatively larger than the diameter of a so-called 'long umbrella'.

[0062] Referring to Figures 3 and 4, it is shown that since the umbrella-covering collecting unit 120 is manufactured with a predetermined length, users can insert a plurality of the umbrellas 1 into the space between the stoppers 122. The plurality of umbrellas 1 may have different diameters. That is, the users may, at the same time, insert a 'long umbrella' and a 'short umbrella' which have a relatively large diameter than the 'long umbrella' into the space between the stoppers 122.

[0063] As a result, users may simultaneously insert umbrellas 1 (including long umbrellas and short umbrellas) having different sizes between the stoppers 122. In a state in which umbrellas are inserted, plastic bags may be simultaneously removed.

[0064] In the present invention, since the stoppers apply pressure to the lateral sides of an umbrella, a plastic bag may be easily removed from the umbrella, and plastic bags covering umbrellas may be collected in response to various-sized umbrellas. The umbrella-covering plastic bags which have been removed from the umbrellas may be collected and discarded easily.

[0065] While the present invention has been described with reference to exemplary embodiments illustrated in the drawings, these embodiments are provided only as examples, and a person having ordinary skill in the art will understand that various modifications and other equivalent embodiments may be derived from these embodiments. Therefore, the actual technical protective scope of the present invention should be defined by the technical spirit and scope of the appended claims.

Claims

1. An apparatus for recovering plastic bags for umbrellas, which is an apparatus for recovering an umbrella-covering plastic bag used to cover an umbrella to prevent rainwater from dropping from the umbrella

when it is raining, the apparatus comprising:

a main body having a space therein; and
an umbrella-covering plastic bag recovering unit disposed on the top of the main body and including a pair of stoppers disposed facing each other and spaced apart at a certain distance, the distance progressively decreasing from top to bottom, to apply elastic force from both sides of the umbrella when the umbrella is inserted, wherein a plurality of engaging protrusions protrude from ends of the pair of stoppers disposed facing each other.

2. The apparatus of claim 1, further comprising a collecting bag hanger disposed on an inner side surface of the main body to hang a collecting bag for collecting the umbrella-covering plastic bags which have been recovered.

3. The apparatus of claim 2, wherein the collecting bag hanger includes a plurality of rings disposed on an inner side surface of the main body to face each other.

4. The apparatus of claim 2, wherein the collecting bag hanger includes a plurality of tongs disposed on an inner side surface of the main body to face each other.

5. The apparatus of claim 2, further comprising a hinged door disposed to be openable and closeable on the main body to enable the collecting bag to be replaced.

6. The apparatus of claim 5, further comprising:

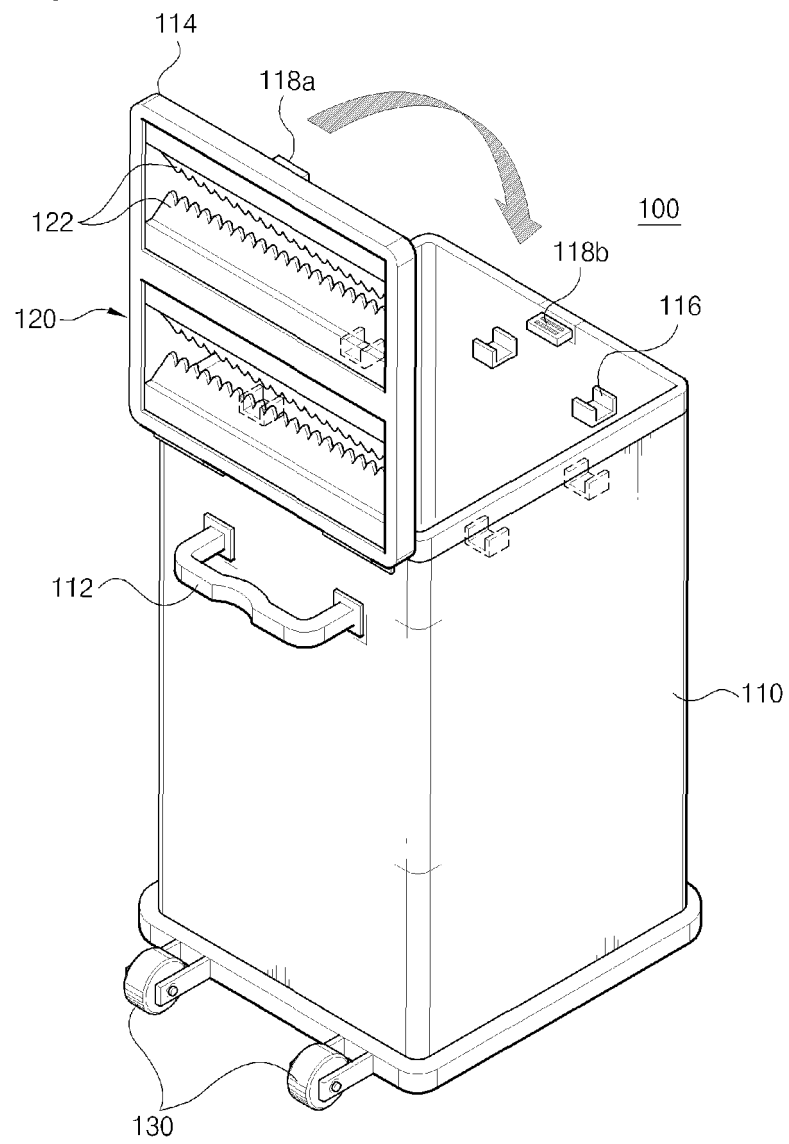
a first magnet attached to one end of the door; and
a second magnet attached to a portion corresponding to the first magnet on an upper inner side of the main body.

7. The apparatus of claim 1, wherein the engaging protrusions are oriented toward an area between the engaging protrusions which face each other.

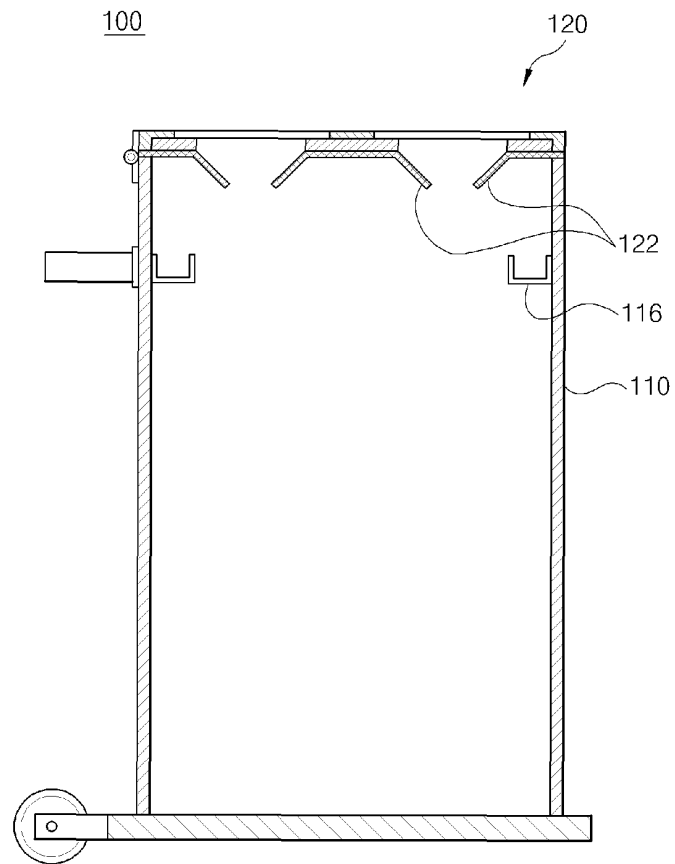
8. The apparatus of claim 7, wherein the engaging protrusions are formed in a triangular shape.

9. The apparatus of claim 7, wherein the engaging protrusions are formed in a trapezoidal shape.

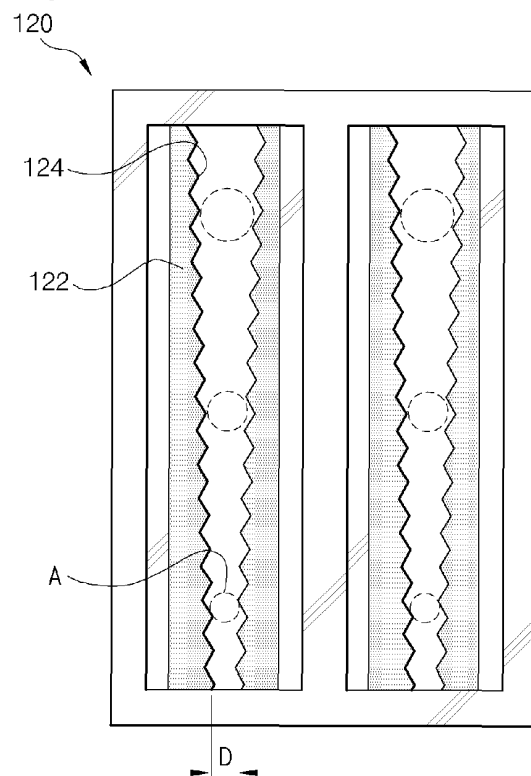
[Fig. 1]



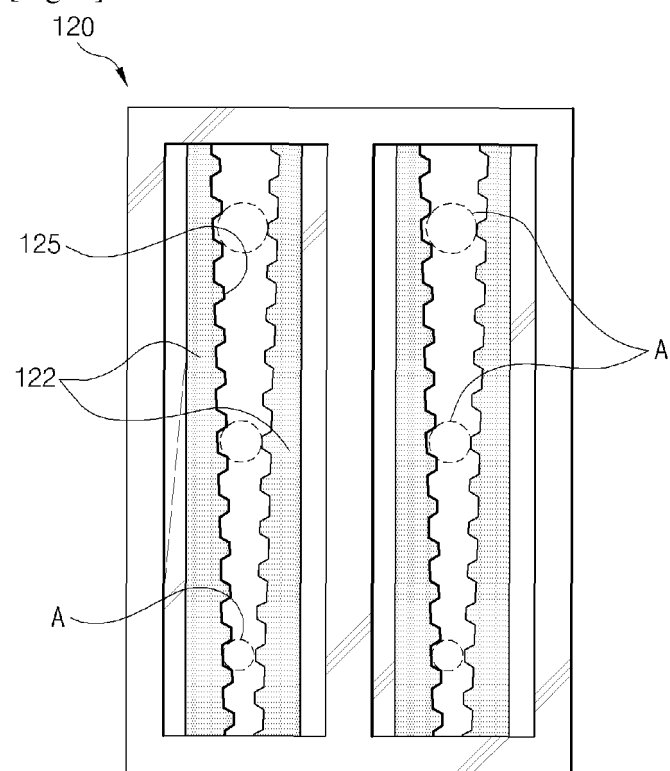
[Fig. 2]



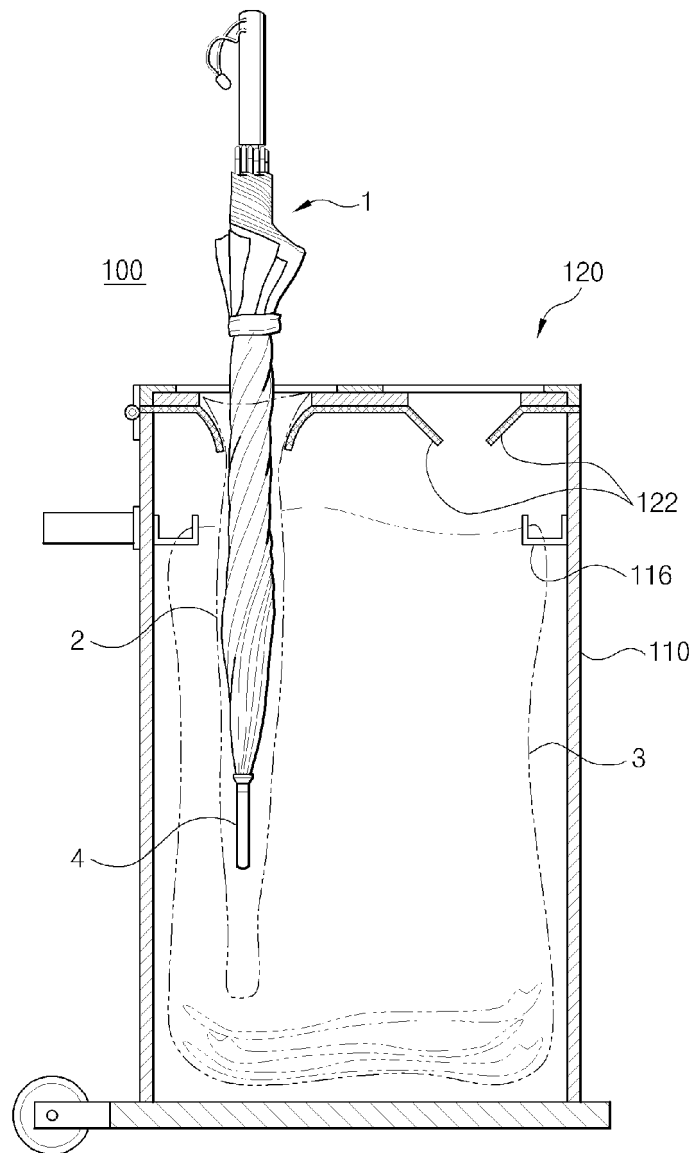
[Fig. 3]



[Fig. 4]



[Fig. 5]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2013/008086

A. CLASSIFICATION OF SUBJECT MATTER

B65B 69/00(2006.01)i, A45B 25/28(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65B 69/00; B65F 5/00; A47G 25/12; B65F 1/14; A45B 25/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models: IPC as above

Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & Keywords: umbrella vinyl, collection, hooking protrusion

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 07-033810 U 23 June 1995 See abstract, paragraphs [0001]-[0021], claims 1-2 and figures 1-10.	1-9
Y	KR 10-2013-0031985 A (KIM, Young Soo) 01 April 2013 See abstract, paragraphs [0001]-[0108], claims 1-33 and figures 1-15.	1-9
A	KR 10-1200639 B1 (KIM, Young Soo) 12 November 2012 See abstract, paragraphs [0001]-[0140], claims 1-31 and figures 1-26.	1-9
A	KR 20-2011-0008717 U (SON, Ga Eun) 15 September 2011 See abstract, paragraphs [0001]-[0007], claims 1-4 and figure 1.	1-9

☐ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

24 MARCH 2014 (24.03.2014)

Date of mailing of the international search report

24 MARCH 2014 (24.03.2014)

Name and mailing address of the ISA/KR


 Korean Intellectual Property Office
 Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701,
 Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2013/008086

5

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member	Publication date
JP 07-033810 U	23/06/1995	NONE	
KR 10-2013-0031985 A	01/04/2013	NONE	
KR 10-1200639 B1	12/11/2012	NONE	
KR 20-2011-0008717 U	15/09/2011	NONE	

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 8026232 A [0005]