(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 2 198 934 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
23.06.2010 Bulletin 2010/25

(51) Int Cl.:
A63B 57/00 *(2006.01)*

(21) Application number: **09179627.6**

(22) Date of filing: **17.12.2009**

(84) Designated Contracting States:
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 SE SI SK SM TR
Designated Extension States:
AL BA RS

(30) Priority: **17.12.2008 DK 200801806**

(71) Applicant: **Chairman ApS**
7400 Herning (DK)

(72) Inventor: **Christensen, James Paul**
7160, Tørring (DK)

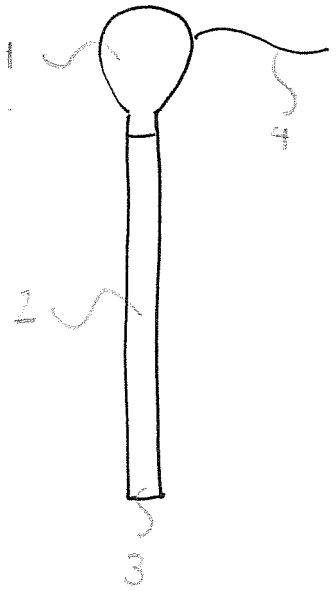
(74) Representative: **Tellefsen, Jens J.**
Patrade A/S,
Fredens Torv 3A
8000 Aarhus C (DK)

(54) **Drying apparatus for a golf bag**

(57) The invention concerns a drying apparatus for providing on/in a golf bag for drying the golf bag and its contents.

The drying apparatus consists of a top part (1) which is connected with or communicating with one or more air tubes. The top part includes a motor and a ventilator. From the top part originates one or more hollow air tubes (2). The drying apparatus may detachably be placed on the golf bag such that the top part (1) is on top of the golf bag and the hollow air tube or tubes (2) inside the cavity of the golf bag.

Figur 1



EP 2 198 934 A1

Description

Field of the Invention

[0001] The present invention concerns an air blower for placing on/in a golf bag for drying the golf bag and its contents.

Background of the Invention

[0002] It is a known problem that playing golf in rain entails that the golf bag and golf clubs become wet, which may reduce the joy of playing for the golf players. When the golf clubs become wet on the handle, the ability of the golf player to control the golf game is reduced, of course diminishing the joy of the game of golf.

[0003] In many of the countries which have introduced golf, the weather is often changeable, why the golf players not so rarely have to go a golf round in rainy weather.

[0004] On the golf course, the golf players often solve the problem of wet handles on golf clubs by wiping the handles free from water with a golf towel. However, the disadvantage is that these golf towels often hang as extra accessory on the golf bag, and therefore these golf towels also become wet if it rains or after having been used for drying golf clubs.

[0005] After a round of golf in rain, both the golf bag and the contents are drenched, and if the bag is just set for drying at usual room temperature, it may take several days before the bag is completely dry. Thereby, the bag with contents is often not dry for the next time the golf player wants to go a golf round. If the golf bag is not dried, the material of the golf bag may crumble and thereby break such that it may be necessary to replace the golf bag regularly.

[0006] If the golf clubs are left in a humid bag, a further problem is that the handles may be damaged as the material of which the grips are made may begin to crack or crumble due to the constant humidity. This means that it may be necessary to replace these handles regularly.

[0007] US 5,834,738 discloses a golf bag with a ventilation and heating device which may dry and heat the golf clubs and the bag itself, if these become wet during the golf round.

[0008] The device is a golf bag with a tube inside the bag. There are a ventilator and a heater which may be activated and which transmit the heat up through the tubes provided to fit the golf clubs. The heating and ventilation may be activated for each tube in the bag so that it is only activated when a golf club is inserted.

[0009] CA 2 571 741 discloses a golf bag that may heat the golf clubs while they are in the bag. The bag is provided with a ventilator with electric heating wires at the bottom of the bag. The ventilator is an integrated part of the golf bag.

[0010] JP 4 187 165 discloses a machine mounted on a golf cart and which may blow air. It can be used for drying the golf clubs if they become wet or for warming the hands thereon.

[0011] A drawback of the prior art techniques for drying the golf clubs is that the drying apparatus is either an integrated part of the golf bag or an integrated part of a golf cart.

[0012] This means that one has to buy a special golf bag with ventilator to be used on days where it rains during the golf round. It is assumed that such golf bags are extra heavy, and the inconvenience of having to carry the extra weight on an entire golf round will reduce the joy of playing for the golf player. To this is added that the golf bag is more expensive in purchase than a common golf bag.

[0013] The disadvantage of an air blower mounted on a golf cart is that far from all golf players use a golf cart during the golf game.

[0014] Moreover, the golf carts are often owned by the golf club at which the game is played. However, most golf clubs do not have enough golf carts for all players in the club to use a golf cart when they arrive at the golf course. Thereby, it will be a limited number of players in each golf club that may enjoy a blower mounted on a golf cart. Therefore, there is a need for a way for drying the entire golf bag with contents rapidly and efficiently, and which is easy to use without adding weight to be carried on a golf round. A way of drying the golf bag with contents in order also to extend the service life of the golf bag and the handles on the golf clubs as well.

Object of the Invention

[0015] Based on the prior art, it is the object of the invention to indicate a drying apparatus for a golf bag by which the problems of the prior art may be eliminated and thereby increase the joy of playing for the golf players.

Description of the Invention

[0016] By the invention is provided a drying apparatus for a golf bag, wherein the drying apparatus includes a housing designed as a top part connected with one or more air tubes. The top part contains a motor and a ventilator, where one or more hollow air tubes originate from the top part, and where the top part is adapted such that the ventilator may suck air from the surroundings and press it out through the air tubes.

[0017] The drying apparatus may be made of e.g. plastic, metal, glass, rubber or combinations of these materials. All materials that can withstand some heating without changing shape and which do not present a fire hazard by heating may be applied. These examples are not exhaustive, and more embodiments may be envisaged.

[0018] The drying apparatus can be provided in all golf bags as the air tube or tubes are just put down into the bag. The drying apparatus is thereby extra equipment for a golf bag, designed such that it may be combined with golf bags of many sizes, brands and shapes.

[0019] A particular problem arises by drying golf bags as opposed to the well-known drying apparatuses for shoes and boots, as it has appeared expedient to discharge the drying air as close to the bottom as possible while at the same time the golf clubs are in the bag, thus limiting the dimensions of the air tubes, and at the same time golf clubs produce such a large air resistance, which is particularly great at the upper end of the bag due to the heads/strike faces of the golf clubs and possible protective caps etc. Hereby a relatively high air resistance is formed. This makes particular demands on the combination of blower design, diameter of the air tubes and design of the outlet from the air tubes at the bottom of the bag. If a normal hairdryer cannot discharge the hot air, the temperature in the heating element will rise so much that finally a fire hazard arises, or that the apparatus, mainly the heating element or associated electronics, becomes excessively hot and is destroyed thereby.

[0020] In connection with the present invention it is thus important that there is provided the right relationship between airflow, temperature and amount of air.

[0021] It is preferred that the motor in the top part of the drying apparatus may use a power supply of 12V DC and 110V to 220V AC.

[0022] In order to use a power supply of 12V DC, the drying apparatus may be activated by a rechargeable battery, which e.g. is found in cars, if the golf player e.g. wants to connect the drying apparatus to the car, whereby the golf bag with contents may be dried when lying in the car. The golf player may thereby spare himself from lifting the golf bag with contents into and out of the car after each round of golf. The drying apparatus may hereby be placed on the golf bag while it lies in the car and be dried up until the next time the player goes to the golf course.

[0023] The drying apparatus is furthermore made for being activated by a power supply of 100V to 220V AC such that the drying apparatus may operate on the public energy supply found in the country in question. The public energy supply is easily accessible whereby one may activate the drying apparatus in the garage, golf club, shed, basement or other places where the golf players may want to store their golf bag with contents when they are not playing golf.

[0024] According to the new invention, the drying apparatus for the golf bag has one or more air tubes. They have a diameter from 20 mm to 50 mm, and a length from 800 mm to 1000 mm.

[0025] The drying apparatus is provided with one or more air tubes. These air tubes are designed such that they fit the dimensions of a golf bag so that the tube has a length almost reaching the bottom of the golf bag. The airflow may thereby dry the handles of the golf clubs located in the golf bag as well as the bottom and side faces of the bag. In an embodiment of the invention, the air tube or tubes may be extendable such that the drying apparatus may be packed into a space-saving form when not in use.

[0026] In an embodiment with a single air tube, it will typically desired to be placed at the centre of the golf bag in order to achieve the best possible heat distribution throughout the entire bag and its contents.

[0027] In an embodiment with several air tubes, the separate air tubes may e.g. be provided with narrower diameter than in the embodiment with only a single air tube. This is on the background that often there is not much redundant space in a golf bag containing golf clubs. Therefore it may be preferred to provide a drying apparatus with several air tubes with small diameter in a densely packed golf bag.

[0028] In an embodiment, one or more air tubes may have a single hole at the end and/or be provided with a number of holes along the length of the hollow air tube.

[0029] By an embodiment with a single hole at the end of the air tube, the air flow from the drying apparatus will only come out at the bottom of the golf bag. Due to the force of gravity, a golf bag will be wetter at the bottom of the bag compared with the top of the bag, since water is sucked downwards. Thereby, it may be most logically to supply the airflow from the drying apparatus to the part of the golf bag which is most wet. A further advantage of this embodiment is that the handles on the golf clubs in the golf bag will face downwards, and thus also be at the bottom of the golf bag.

[0030] In an embodiment, where several holes are provided along the air tube in a part of the side face of the hollow air tube, these holes may have various shapes, such as e.g. circular, oval, four-edged, star-shaped, or with other hole shapes. Furthermore, it is possible that the air tube is designed with a number of slits or slots. These examples are not exhaustive, and more embodiments may be envisaged.

[0031] The advantage of an embodiment with holes along the side face of the air tube is that a better distribution of the airflow occurs such that a greater area with air flow is achieved, and thereby a more even distribution of the air flow in the golf bag will be provided.

[0032] For the golf player it is desirable to have dry handles on golf clubs since it make the golf player have a better grip on the golf club when striking. If the handles are wet or moist, the hand may slide, whereby the shot will become inaccurate, reducing the joy of playing for the golf player.

[0033] It is preferred that the airflow from the drying apparatus has a temperature from room temperature, preferably with a temperature from 30°C and to 70°C, both included. In one embodiment, the drying apparatus may form an airflow at room temperature, but a heating function on the ventilator may be activated as well, whereby heating of the airflow from the drying apparatus is effected.

[0034] If the airflow is heated, it will enhance the drying action of the drying apparatus such that it is to be activated for a short time in order to dry the golf bag with contents. However, it is of course not desired that the temperature becomes so high that heat damage occur to the material of which the golf bag is made.

[0035] However, in some cases it may be preferred that the drying apparatus does not heat the airflow, but only dries the golf bag with contents with an airflow at room temperature. This may be the case where possibly there are heat-sensitive materials in the golf bag or in the surroundings of the drying apparatus.

[0036] Moreover, it is suitable that the drying apparatus can produce an airflow from 200 l/min to 1000 l/min. The greater airflow, the faster drying of the golf bag with contents. However, no greater airflow is want than such that the drying apparatus is still situated in a stable position upon the golf bag.

[0037] In a preferred embodiment, the drying apparatus has a timer which may be set to automatic switching the apparatus on and/or off after a desired time interval. This makes the drying apparatus easier to use as one may just set the timer, and thereby the drying apparatus and the golf bag may be left to themselves as the drying apparatus is automatically switched off after a desired period of time.

The Drawing

[0038] Embodiments of the invention are described in more detail below with reference to the accompanying drawing in which:

Fig. 1 shows a drying apparatus for a golf bag, consisting of a top part with motor and ventilator from which a single hollow air tube originates;

Fig. 2A-D show various types of air tubes.

Description of Example Embodiments

[0039] On Fig. 1 is seen an embodiment of the invention where the drying apparatus includes a housing with a top part 1 which, though not appearing on the Figure, includes a motor, a heating element and a ventilator. The top part communicates with a single air tube 2. This air tube is hollow and at the opposite end of the top part is found a single hole where the airflow exits. Moreover, a wire 4 is seen such that the drying apparatus may have a power supply.

[0040] The drying apparatus according to the invention may use a power supply of 12V DC such that the apparatus may be activated by a rechargeable battery, e.g. as such used in cars. This provides a wider field of application for the invention, whereby the drying apparatus is not limited to use close to the public power network. Moreover, it is also possible to activate the drying apparatus with 110V or 220V AC found in the public electric network. The public power supply is easy to use as it only requires coupling the drying apparatus to the power outlet.

[0041] Though not appearing on the Figure, a timer button may be provided on the top part, enabling setting of the drying apparatus to automatic switching on or off after a desired period of time.

[0042] Though not shown on the Figures, the top part may also be protected by a wire guard so that children or domestic animals cannot get their limbs jammed by accident, or get so close to the ventilator that they are burned. The wire guard or net guard also prevents dirt and objects to be sucked in such that free airflow to the ventilator is not obstructed.

[0043] It is possible to make an embodiment of the invention where the top part is connected to several hollow air tubes.

[0044] The invention may furthermore be made in an embodiment which is not shown on the Figures, where the air tube or tubes are extendable such that the drying apparatus can be collapsed to take up substantially less space when the apparatus is not in use.

[0045] Various types of embodiments of the air tube are shown on Fig. 2.

[0046] Fig. 2A shows an embodiment where there is an even distribution of holes 5 along part of the air tube.

[0047] Fig. 2B shows an embodiment where there are a number of longitudinal slits 6 along part of the air tube and at its mouth.

[0048] Fig. 2C shows an embodiment where there is transverse slit 7 along part of the air tube.

[0049] Fig. 2D shows an embodiment where there are curved openings 8 at the end of the air tube.

[0050] The drying apparatus may produce an airflow having the same temperature as room temperature, or there may be provided heating of the air to a temperature from 30°C to 70°C, which will increase the drying effect of the apparatus such that the golf bag with contents is dried more quickly.

[0051] It is preferred that the drying apparatus produces an airflow from 200 l/min to 1000 l/min, both included. The greater airflow, the greater the drying effect of the apparatus. However, not too great airflow is desired as unwanted air pressure on the golf bag and its contents may otherwise arise.

[0052] The invention may designed of e.g. plastic, metal, glass, rubber or combinations of these materials. These examples are not exhaustive, and more embodiments may be envisaged.

Claims

1. A drying apparatus for a golf bag, wherein the drying apparatus includes a housing designed as a top part connected with one or more air tubes, the top part containing a motor and a ventilator, where one or more hollow air tubes originate from the top part, and where the top part is adapted such that the ventilator may suck air from the surroundings and press it out through the air tubes.

2. Drying apparatus for a golf bag according to claim 1, **characterised in that** the motor in the top part

uses a power supply of 12V DC and/or a power supply of 110V or 220V AC.

3. Drying apparatus for a golf bag according to claim 1 or 2, **characterised in that** the one or more air tubes have a diameter from 20 mm to 50 mm, and a length from 800 mm to 1000 mm.

4. Drying apparatus for a golf bag according to one or more preceding claims, **characterised in that** the one or more air tubes have a single hole at the end opposite the top part, and/or are provided with a number of holes along the length of the hollow air tube.

5. Drying apparatus for a golf bag according to one or more preceding claims, **characterised in that** the drying apparatus may produce an airflow from 200 l/min to 1000 l/min.

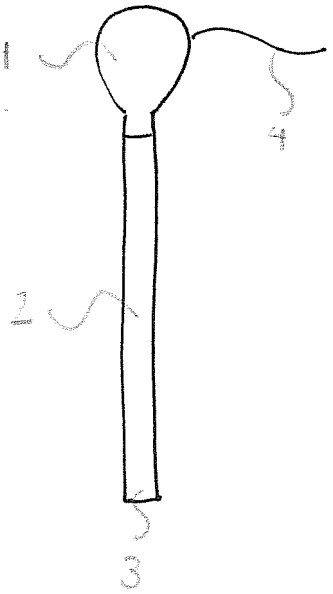
6. Drying apparatus for a golf bag according to any preceding claim, **characterised in that** the airflow from the drying apparatus has a temperature at least of room temperature, more preferred from 30°C to 70°C.

7. Drying apparatus for a golf bag according to one or more preceding claims, **characterised in that** the drying apparatus includes a timer which may be set to automatic switching the apparatus on and/or off after a desired period of time.

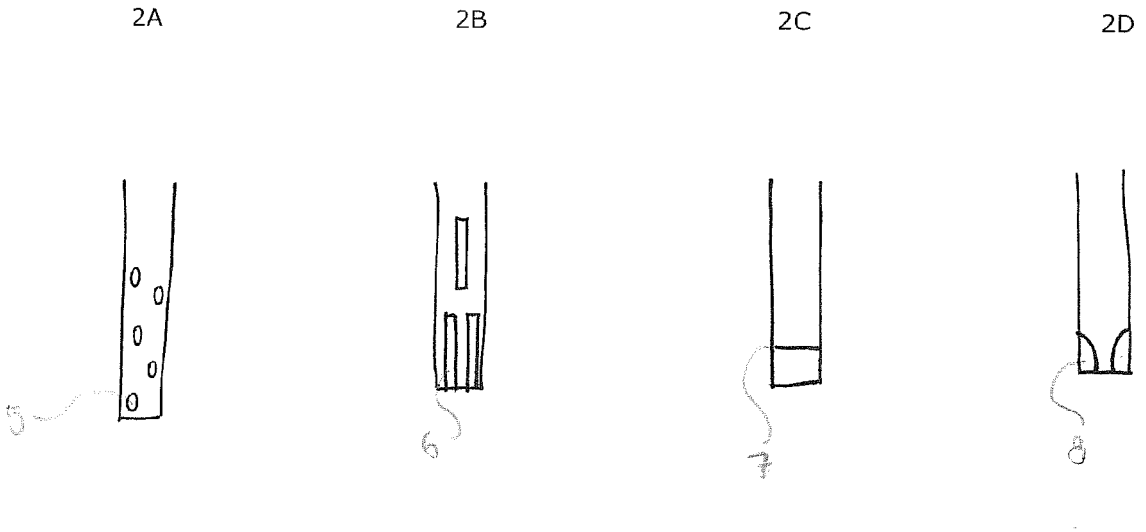
8. Drying apparatus for a golf bag according to one or more of claims 1 to 3, **characterised in that** the one or more air tubes at the end opposite the top part are provided with one or more air exit holes, the air exit holes being arranged in the wall of the tube relative to the longitudinal axis of the air exit tube close and to the end of the tube.

9. Use of a drying apparatus according to one or more of claims 1 to 8, **characterised in that** the drying apparatus is connected to a power supply and the air tube is disposed inside a golf bag which is optionally filled with or emptied of golf clubs such that the end of the air tube opposite the top part is close to or in contact with the bottom of the golf bag.

Figur 1



Figur 2



Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 09 17 9627

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y A	US 2003/170013 A1 (PATSHKOWSKI RICHARD [US] ET AL) 11 September 2003 (2003-09-11) * paragraphs [0021], [0022], [0026], [0028]; figures 1-6 *	1-6 7,9 8	INV. A63B57/00
Y,D A	US 5 834 738 A (WILSON MICHAEL [GB]) 10 November 1998 (1998-11-10) * column 4, lines 43-58; figures *	7,9 1-6	
A	US 2003/218007 A1 (CORNELL JEFFREY [US]) 27 November 2003 (2003-11-27) * paragraphs [0055], [0056], [0062]; figure 16 *	1-9	
A	DE 200 05 018 U (PATZER HANS WILLY) 17 August 2000 (2000-08-17) * pages 2,3; figure 3 *	1-9	

TECHNICAL FIELDS SEARCHED (IPC)

A63B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	18 March 2010	Teissier, Sara

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

1

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 17 9627

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-03-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003170013 A1	11-09-2003	NONE	
US 5834738 A	10-11-1998	NONE	
US 2003218007 A1	27-11-2003	NONE	
DE 20005018 U	17-08-2000	NONE	

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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

- US 5834738 A **[0007]**
- CA 2571741 **[0009]**
- JP 4187165 A **[0010]**