(11) **EP 1 897 624 A1**

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

12.03.2008 Bulletin 2008/11

(51) Int Cl.:

B05B 17/08 (2006.01)

F21S 8/00 (2006.01)

(21) Application number: 07111735.2

(22) Date of filing: 04.07.2007

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated Extension States:

AL BA HR MK YU

(30) Priority: 05.09.2006 NL 2000212

(71) Applicant: Ubbink Garden B.V. 1822 BN Alkmaar (NL)

(72) Inventor: Klaus, Hartmut 46395 Bocholt (DE)

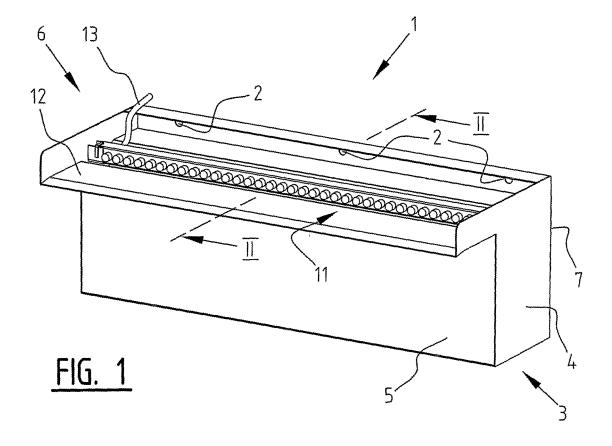
(74) Representative: **Hooiveld**, **Arjen Jan Winfried Arnold & Siedsma**

Sweelinckplein 1 2517 GK Den Haag (NL)

(54) Garden device

(57) A garden device comprising a waterfall object (1) to be installed in a garden, as well as a water system for supplying water to the waterfall object, wherein said waterfall object (1) includes an overflow, and wherein the water being supplied to the waterfall object can flow down

over the overflow, characterised in that the waterfall object (1) comprises a light source (11) disposed behind the overflow, wherein the light emitted by the light source (11) can illuminate the water from behind at the location of the overflow, in such a manner that the water functions as a light guide for guiding the light in downward direction.



20

30

35

40

[0001] The invention relates to a garden device comprising a waterfall object to be installed in a garden, as well as a water system for supplying water to the waterfall object, wherein said waterfall object includes an overflow, and wherein the water being supplied to the waterfall object can flow down over the overflow. The invention also relates to a water object used in the garden device. [0002] Such a garden device is generally known. Especially garden centres are experiencing an increasing public interest in all kinds of garden ornaments and related articles. Said public interest emanates in particular from a growing desire to arrange the surroundings of the house, in particular the garden, in an attractive manner with ornaments, such as fountains, waterfalls and the like. Especially the last few years there has been a growing interest in waterfall objects from which water flows down in a decorative manner.

1

[0003] The object of the invention is to provide a garden device that meets the public's increasing interest in arranging a garden in a decorative manner by means of waterfall objects.

[0004] In order to accomplish that object, a garden device of the kind referred to in the introduction is characterised in that the waterfall object comprises a light source disposed behind the overflow, wherein the light emitted by the light source can illuminate the water from behind at the location of the overflow, in such a manner that the water functions as a light guide for guiding the light in downward direction. In other words, the water present at the location of the overflow behaves as a light guide, as if the water forms a collection of glass fibres that keep light emitted from behind "captured" within itself and thus project it in downward direction. In this way a playful and elegant effect of falling water and light is created.

[0005] In a preferred embodiment of a garden device according to the invention, the overflow comprises a flat portion, at the location of which the light can illuminate the water from behind. As a result, the light emitted from behind by the light source can be efficiently coupled into the water flowing on said flat portion, which water functions as a light guide.

[0006] In another preferred embodiment of a garden device according to the invention, the flat portion of the overflow is formed by a wall portion of the waterfall object. Said wall portion preferably extends in horizontal direction, so that the light being emitted upstream thereof is efficiently coupled in horizontal direction into the water flowing on said flat portion. The wall portion in particular forms part of a lowered outer wall of the waterfall object. Said lowered outer wall forms the overflow, as it were.

[0007] In another preferred embodiment of a garden device according to the invention, the light source comprises several LEDs. Preferably, said LEDs are arranged in a row behind the overflow, with the row of LEDs extending along the entire length of the overflow.

[0008] In another preferred embodiment of a garden

device according to the invention, the water system can be connected to the water supply system of a house. The water system in particular comprises a water pump, which is connected to the waterfall object via a (preferably flexible) water supply line.

[0009] In another preferred embodiment of a garden device according to the invention, the light source can be connected to the power system of a house. In other words, the light source is fed from the power system.

[0010] As already said before, the invention also relates to a waterfall object as defined in the present garden device. The waterfall object is in particular embodied as a stainless steel reservoir having a lowered outer wall configured as an overflow, which reservoir includes a connection for connecting a water supply line (for example a water hose) to the reservoir.

[0011] The invention further relates to a waterfall object as defined in the present garden device, wherein the device is provided with a housing. Preferably, substantially only the flat wall portion extends outside the housing through an opening. Preferably, said housing is made of a material selected from a group consisting of: stone, metal, plastic or wood.

[0012] The invention will now be explained in more detail with reference to figures illustrated in a drawing, in which:

- Figure 1 is a schematic, perspective view of a preferred embodiment of the invention;
- Figure 2 is a schematic, cross-sectional view of the preferred embodiment of figure 1 along the line II therein;
- Figure 3 is a schematic, perspective view of another preferred embodiment of the invention.

[0013] Figure 1 schematically shows a waterfall object, which is connected to the water system of a house, in the form of a stainless steel reservoir 1, which may be suspended in a garden at the location of the suspension points 2. The reservoir 1 comprises a bottom 3 and four outer walls or side walls 4,5,6,7, one side wall 5 of which is lowered so as to function as an overflow. Holes 8,9 are provided in the bottom 3 and the side wall 7 for connecting a water supply line 10 thereto. If the hole 8 in the bottom 3 is used as a water connection, the whole 9 in the side wall 7 must be sealed, for example by means of a plug, and vice versa. Furthermore, a row of LEDs 11 are provided behind a horizontally extending flat wall portion 12 of the lowered side wall 5. An electric current conductor 13 is connected to the power system of the house via a transformer near its one end and to the row of LEDs 11 near its other end.

[0014] As is shown more clearly in figure 2, the water will flow down over the flat wall portion 12 after some time when the reservoir 1 is being filled with water. The water flowing on the flat wall portion 12 is illuminated from be-

2

5

15

20

25

hind by the row of LEDs 11, however, so that the emitted light is coupled into the water flowing at that location, as if said water were a light guide in the form of glass fibres. The light that is guided downwards over the flat wall portion 12 by the water is thus projected at a location where also the water falls on the ground. The combination of falling water and illumination increases the attractiveness of the whole.

[0015] In figure 3 a waterfall object is shown in which the reservoir 1 as shown in figure 1 is incorporated in a stone, metal or plastic wall 14. An opening 15 is to that end provided in one side of the wall 14, through which opening the flat wall portion 12 extends for guiding the water downwards. The waterfall object is provided with water and power supply means (not shown), preferably at a location that is hidden from view.

[0016] It is noted that the invention is not limited to the embodiment as shown herein, but that it also extends to other variants that fall within the scope of the appended claims. Thus it will be apparent to those skilled in the art that the length of the reservoir 1 and the number of LEDs 11 that are used may vary.

Claims

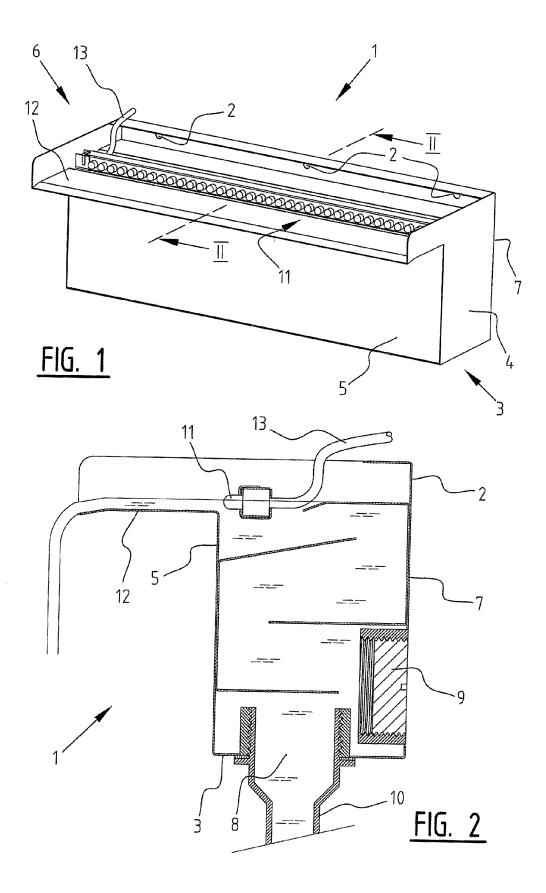
- 1. A garden device comprising a waterfall object (1) to be installed in a garden, as well as a water system for supplying water to the waterfall object (1), wherein said waterfall object (1) includes an overflow, and wherein the water being supplied to the waterfall object (1) can flow down over the overflow, characterised in that the waterfall object (1) comprises a light source disposed behind the overflow, wherein the light emitted by the light source can illuminate the water from behind at the location of the overflow, in such a manner that the water functions as a light guide for guiding the light in downward direction.
- 2. A garden device according to claim 1, wherein the overflow comprises a flat portion (portion), at the location of which the light can illuminate the water from behind.
- **3.** A garden device according to claim 2, wherein the flat portion (12) of the overflow is formed by a wall portion of the waterfall object (1).
- **4.** A garden device according to claim 3, wherein said wall portion extends at least substantially in horizontal direction.
- 5. A garden device according to claim 3 or 4, wherein said wall portion forms part of a lowered outer wall (5) of the waterfall object (1).
- **6.** A garden device according to any one of the preceding claims 1-5, wherein the light source comprises

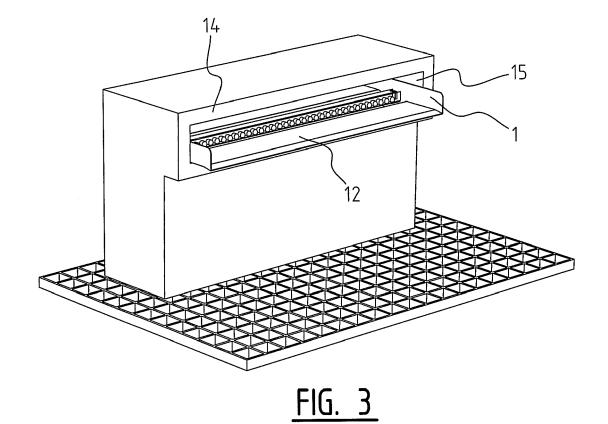
several LEDs (11).

- 7. A garden device according to claim 6, wherein said LEDs (11) are arranged in a row behind the overflow.
- **8.** A garden device according to any one of the preceding claims 1-7, wherein the water system can be connected to the water supply system of a house.
- 9. A garden device according to any one of the preceding claims 1-8, wherein the light source can be connected to the power system of a house.
 - A garden device according to any one of the preceding claims 1-9, wherein the device comprises a wall (14), in which the waterfall object (1) is integrated.
 - **11.** A garden device according to claim 10, wherein substantially only the flat wall portion (12) extends outside the wall (14) through an opening (15).
 - **12.** A garden device according to claim 10 or 11, wherein said wall (14) is made of a material selected from a group consisting of: stone, metal, plastic or wood.
 - **13.** A waterfall object (1) as defined in a garden device according to any one of the preceding claims 1-12.

55

45







EUROPEAN SEARCH REPORT

Application Number EP 07 11 1735

	Citation of document with in	ndication, where appropriate,	Relevant	CLASSIFICATION OF THE	
Category	of relevant pass		to claim	APPLICATION (IPC)	
Х	US 4 749 126 A (KES 7 June 1988 (1988-6	SSENER H P M [NL] ET AL) 06-07)	1-5, 8-10,12, 13	INV. B05B17/08 F21S8/00	
	* figures 12c-12e * * column 6, line 43 * figures 16a,16b * * column 8, line 7	3 - column 7, line 33 *		·	
X	6 March 2001 (2001- * abstract *		1-3,6-9, 13		
Х	26 November 2002 (2 * abstract *		1-5,8-13		
Х	EP 1 023 947 A (HON 2 August 2000 (2000 * paragraphs [0021] * paragraph [0032] * figures 1,5 *)-08-02) , [0022] *	1-5,8-13	TECHNICAL FIELDS SEARCHED (IPC) F21S B05B	
X	BERGSTROM NEIL [US] 22 December 2005 (2 * figures 1-4 *		1-5, 8-10,13		
X US 2005/235407 A1 27 October 2005 (20 * abstract * * figures *		KUNKEL RICHARD [US])	1-4, 8-10,12, 13		
		-/			
	The present search report has	'			
	Place of search	Date of completion of the search		Examiner	
	The Hague	7 December 2007	Pré	vot, Eric	
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anot iment of the same category inological background written disclosure rmediate document	L : document cited for	ument, but publis the application rother reasons	hed on, or	



EUROPEAN SEARCH REPORT

Application Number EP 07 11 1735

	DOCUMENTS CONSID				
Category	Citation of document with in of relevant pass	ndication, where appropriate, ages	Relev to cla		CLASSIFICATION OF THE APPLICATION (IPC)
	of relevant pass. US 6 416 197 B1 (CH 9 July 2002 (2002-6 * figures 1,3 *	•	1	im	TECHNICAL FIELDS SEARCHED (IPC)
	The present search report has	<u> </u>			
	Place of search	Date of completion of the sea 7 December 20		Dráv	Examiner
	The Hague				ot, Eric
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anot ument of the same category inological background written disclosure rmediate document	E : earlier pat after the fill D : document L : document	cited in the applic cited for other rea	t publishe ation asons	ed on, or

8

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 07 11 1735

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.

07-12-2007

Patent document cited in search report		Publication date	Patent family member(s)		Publication date	
US 4749126	Α	07-06-1988	DE WO EP JP US	3565171 8505167 0181896 61502155 4901922	D1 A1 A1 T A	27-10-1988 21-11-1985 28-05-1986 25-09-1986 20-02-1990
US 6196471	B1	06-03-2001	AU AU CA EP WO		A A1 A1	31-07-2003 12-06-2001 07-06-2001 04-09-2002 07-06-2001
US 6484952	В2	26-11-2002	US	2002074420	A1	20-06-2002
EP 1023947	Α	02-08-2000	CN JP US	1262184 2000219000 6382520	Α	09-08-2000 08-08-2000 07-05-2002
WO 2005120321	Α	22-12-2005	US	2005268393	A1	08-12-2005
US 2005235407	A1	27-10-2005	CA	2498110	A1	21-10-2005
US 6416197	B1	09-07-2002	DE	20109859	U1	24-01-2002

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