



(11)

EP 3 942 981 A1

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:  
26.01.2022 Bulletin 2022/04

(51) International Patent Classification (IPC):  
A47K 3/28 (2006.01)

(21) Application number: 21182629.2

(52) Cooperative Patent Classification (CPC):  
A47K 3/285

(22) Date of filing: 30.06.2021

(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

Designated Validation States:

KH MA MD TN

(30) Priority: 24.07.2020 CN 202021482364 U

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## (54) AN OUTDOOR SHOWER

(57) The present disclosure discloses an outdoor shower apparatus comprising a supporting body (10) and a shower assembly (20) installed on the supporting body (10). The shower assembly (20) includes a shower head (21), a water supply pipe, a valve (22) and a faucet (23), and the supporting body (10) includes an upper supporting section (11) and a lower supporting section (12) that are arranged one above the other and detachably connected. A length of the upper supporting section (11) is approximately equal to that of the lower supporting section (12), and the shower head (21) is arranged at a top end of the upper supporting section (11). The division of the supporting body (10) in two parts (11, 11) allows for eased packaging and transport of the shower apparatus.

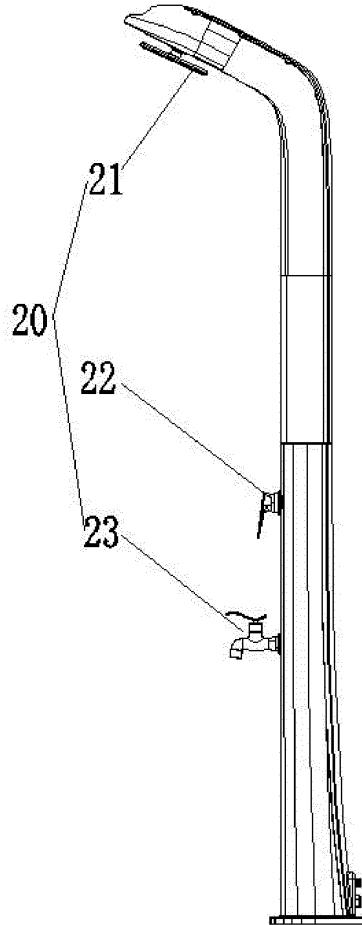


FIG. 2

**Description****TECHNICAL FIELD**

**[0001]** The present disclosure relates to the shower technical field, in particular to an outdoor shower apparatus.

**RELATED ART**

**[0002]** A shower apparatus in the related art is generally configured in a residence and needs to be equipped with a shower head or a faucet. The shower head needs to be arranged on a wall when in use, which has high requirements on the sites and is inconvenient to carry around; when going on a field trip or working away from the residence, users can not take a shower. In order to solve the above technical problems, those skilled in the art actively do researches and developments, and have realized better technical effects. At present, a rotational molding outdoor shower apparatus on the market is configured to be integrated, which is inconvenient to transport and carry.

**SUMMARY**

**[0003]** The purpose of the present disclosure is to provide an outdoor shower apparatus which is convenient to transport and carry.

**[0004]** In order to achieve the above-mentioned purpose, the technical solution used by the present disclosure is to provide an outdoor shower apparatus which includes a supporting body and a shower assembly installed on the supporting body, wherein the shower assembly includes a shower head, an water supply pipe, a valve and a faucet, and the supporting body includes an upper supporting section and a lower supporting section that are arranged one above the other and detachably connected, the shower head is arranged at a top end of the upper supporting section.

**[0005]** Preferably, a length of the upper supporting section is approximately equal to that of the lower supporting section, so that the packaging is easier and the packaging size can be reduced.

**[0006]** Furthermore, between a lower end surface of the upper supporting section and an upper end surface of the lower supporting section, one of them is provided with a first joint structure, the other is provided with a second joint structure; the first joint structure is a positioning post, the second joint structure is provided with a positioning hole, the positioning post is inserted into the positioning hole, and the upper end surface of the upper supporting section and the lower end surface of the lower supporting section are attached to each other.

**[0007]** Furthermore, the positioning post is T-shaped and includes a fixed section close to its fixed end and a free section close to its free end, an outer diameter of the free section is greater than an outer diameter of the

fixed section, and an outer side surface of the free section is provided with a plurality of notches extending in the axial direction arranged at intervals along the circumferential direction. The positioning hole is T-shaped and includes a hole bottom section close to its hole bottom and an opening section close to its holes, an inner diameter of the hole bottom section is larger than an inner diameter of the opening section, an inner side surface of the opening section is provided with a plurality of grooves extending in the axial direction arranged at intervals along the circumferential direction. The opening section is sleeved in the free section, and the outer side surface of the free section is matched with the inner side surface of the opening section in a concave-convex engagement and has a degree of freedom of mutual movement in the axial direction. The outer side surface of the fixed section is mutually attached to a radial protrusion of the inner side surface of the opening section, and a radial protrusion of the outer side surface of the free section is mutually attached to the inner side surface of the hole bottom section.

**[0008]** Furthermore, both the first joint structure and the second joint structure can be detachably connected to the supporting body.

**[0009]** Furthermore, both the first joint structure and the second joint structure are connected to the supporting body by screws.

**[0010]** Furthermore, the upper supporting section is provided with an upper water passage, the lower supporting section is provided with a lower water passage, the upper water passage and the lower water passage are connected to form a water supply pipe, and a sealing ring is provided between the upper supporting section and the lower supporting section.

**[0011]** Furthermore, the upper end surface of the lower supporting section is provided with a positioning post that is concentric with the lower supporting section, the positioning post is provided with a lower water passing hole that is concentric with the positioning post, and a sealing ring surrounding the lower water passing hole is provided on the free end surface of the positioning post. The lower end surface of the upper supporting section is provided with a positioning hole that is concentric with the upper supporting section, the positioning hole is also provided

40 with a water passing post that is concentric with the positioning hole, the water passing post is provided with an upper water passing hole that is concentric with the water passing post, and the positioning post is inserted into the positioning hole and the water passing post is inserted into the lower water passing hole. The free end surface of the positioning post is attached to a bottom of the positioning hole each other, and the upper end surface of the upper supporting section is attached to the lower end surface of the lower supporting section. The lower supporting section is provided with the lower water passage communicated with the lower water passing hole, and the upper supporting section is provided with the upper water passage communicated with the upper water pass-

ing hole, and the upper water passage and the lower water passage are connected to form the water supply pipe.

**[0012]** Furthermore, the valve and the faucet are arranged one above the other and installed on the lower supporting section.

**[0013]** Furthermore, the supporting body is in the shape of an inverted golf club.

**[0014]** Furthermore, both the upper supporting section and the lower supporting section are formed by rotational molding.

**[0015]** By using the above-described technical solution, the present disclosure has the following advantages as compared to the existing technology:

1. A separate structure is used in the outdoor shower apparatus disclosed by the present disclosure, which can reduce the packaging size, and is convenient to transport and carry.
2. A fast disassembled structure between the positioning post and the positioning hole are used in the outdoor shower apparatus disclosed by the present disclosure, which is easy to operate.
3. The sealing ring is provided within the outdoor shower apparatus disclosed by the present disclosure to ensure a sealing arrangement of the water supply pipe.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[0016]**

FIG. 1 is a front view of an entire outdoor shower apparatus according to the present disclosure.

FIG. 2 is a side view of the entire outdoor shower apparatus according to the present disclosure.

FIG. 3 is a front view of an upper supporting section of the outdoor shower apparatus according to the present disclosure.

FIG. 4 is a bottom view of the upper supporting section of the outdoor shower apparatus according to the present disclosure.

FIG. 5 is a front view of an lower supporting section of the outdoor shower apparatus according to the present disclosure.

FIG. 6 is a bottom view of the lower supporting section of the outdoor shower apparatus according to the present disclosure.

FIG. 7 is a sectional view of the first joint structure and the second joint structure of the outdoor shower

apparatus according to the present disclosure.

**[0017]** 10. supporting body; 11. upper supporting section; 12. lower supporting section; 20. shower assembly; 21. shower head; 22. valve; 23. faucet; 31. positioning post; 32. notch; 33. lower water passing hole; 41. positioning hole; 42. groove; 43. water passing post; 44. upper water passing hole; 51. sealing ring.

#### **DETAILED DESCRIPTION OF THE EMBODIMENTS**

**[0018]** The present disclosure will be further described in detail below in conjunction with the drawings and embodiments.

##### **15 Embodiment 1**

**[0019]** Referring to FIG. 1 to FIG. 7, as shown in the figures, an outdoor shower apparatus includes a supporting body 10 and a shower assembly 20 installed on the supporting body 10, wherein the shower assembly 20 includes a shower head 21, an water supply pipe, a valve 22, and a faucet 23, and the supporting body 10 includes an upper supporting section 11 and a lower supporting section 12 that are arranged one above the other and detachably connected. A length of the upper supporting section 11 is approximately equal to that of the lower supporting section 12, and the shower head 21 is arranged at a top end of the upper supporting section 11.

**[0020]** In a preferred implementation of the embodiment, between a lower end surface of the upper supporting section 11 and an upper end surface of the lower supporting section 12, one of them is provided with a first joint structure and the other is provided with a second joint structure. The first joint structure is a positioning post 31, the second joint structure is provided with a positioning hole 41, the positioning post 31 is inserted into the positioning hole 41, so the upper end surface of the upper supporting section 11 is mutually attached to the lower end surface of the lower supporting section 12.

**[0021]** Specifically, during assembly, the positioning post is first inserted into the positioning hole, and then rotated and tightened, which is very convenient to operate.

**[0022]** In a preferred implementation of the embodiment, the positioning post 31 is T-shaped and includes a fixed section close to its fixed end and a free section close to its free end, an outer diameter of the free section is greater than an outer diameter of the fixed section, and an outer side surface of the free section is provided with a plurality of notches 32 extending in the axial direction arranged at intervals along the circumferential direction. The positioning hole 41 is T-shaped and includes a hole bottom section close to its hole bottom and an opening section close to its holes, an inner diameter of the hole bottom section is larger than an inner diameter of the opening section, an inner side surface of the opening section is provided with a plurality of grooves 42 extend-

ing in the axial direction arranged at intervals along the circumferential direction. The opening section is sleeved in the free section, and the outer side surface of the free section is matched with the inner side surface of the opening section in a concave-convex engagement and has a degree of freedom of mutual movement in the axial direction. The outer side surface of the fixed section is mutually attached to a radial protrusion of the inner side surface of the opening section, and a radial protrusion of the outer side surface of the free section is mutually attached to the inner side surface of the hole bottom section.

**[0023]** In a preferred implementation of this embodiment, both the first joint structure and the second joint structure can be detachably connected to the support body 10.

**[0024]** In a preferred implementation of the embodiment, both the first joint structure and the second joint structure are connected to the supporting body 10 by screws.

**[0025]** In a preferred implementation of the embodiment, the upper supporting section 11 is provided with an upper water passage, the lower supporting section 12 is provided with a lower water passage, and the upper water passage and the lower water passage are connected to form a water supply pipe. A sealing ring 51 is provided between the upper supporting section 11 and the lower supporting section 12.

**[0026]** In a preferred implementation of the embodiment, the upper end surface of the lower supporting section 12 is provided with a positioning post 31 that is concentric with the lower supporting section 12, the positioning post 31 is provided with a lower water passing hole 33 that is concentric with the positioning post 31, and a sealing ring 51 surrounding the lower water passing hole 33 is provided on the free end surface of the positioning post 31. The lower end surface of the upper supporting section 11 is provided with a positioning hole 41 that is concentric with the upper supporting section 11, the positioning hole 41 is also provided with a water passing post 43 that is concentric with the positioning hole 41, and the water passing post 43 is provided with an upper water passing hole 44 that is concentric with the water passing post 43. The positioning post 31 is inserted into the positioning hole 41 and the water passing post 43 is inserted into the lower water passing hole 33. The free end surface of the positioning post 31 is mutually attached to a bottom of the positioning hole 41, and the upper end surface of the upper supporting section 11 is attached to the lower end surface of the lower supporting section 12. The lower supporting section 12 is provided with the lower water passage communicated with the lower water passing hole 33, the upper supporting section 11 is provided with the upper water passage communicated with the upper water passing hole 44, and the upper water passage is connected with the lower water passage to form the water supply pipe.

**[0027]** In a preferred implementation of the embodi-

ment, the valve 22 and the faucet 23 are arranged one above the other and installed on the lower supporting section 12.

**[0028]** In a preferred implementation of the embodiment, the supporting body 10 is in the shape of an inverted golf club.

**[0029]** In a preferred implementation of the embodiment, both the upper supporting section 11 and the lower supporting section 12 are formed by rotational molding.

**[0030]** During transportation or storage, the supporting body is separated into the upper supporting section and the lower supporting section, thus the packaging size can be reduced, which is convenient to transport and carry. When in use, the upper supporting section and the lower supporting section are combined into the supporting body for taking a shower.

**[0031]** Those skilled in the art can realize or use the present disclosure according to the above description of the disclosed embodiments. Various modifications to these embodiments will be obvious to those skilled in the art, and the general principles defined herein can be implemented in other embodiments without departing from the spirit or scope of the present disclosure. Therefore, the present disclosure will not be limited to the embodiments shown in this article, but should conform to the widest scope consistent with the principles and novel features disclosed in this article.

### 30 Claims

1. An outdoor shower apparatus comprising a supporting body (10) and a shower assembly (20) installed on the supporting body (10), the shower assembly (20) including a shower head (21), a water supply pipe connected with the shower head (21), a valve (22) and a faucet (23) arranged on the upper water pipe; wherein the supporting body (10) includes an upper supporting section (11) and a lower supporting section (12) that are arranged one above the other and detachably connected, and the shower head (21) is arranged on a top end of the upper supporting section (11).
2. The outdoor shower apparatus according to claim 1, wherein between a lower end surface of the upper supporting section and an upper end surface of the lower supporting section, one of them is provided with a first joint structure, the other is provided with a second joint structure; the first joint structure is a positioning post (31), the second joint structure is provided with a positioning hole (41), the positioning post (31) is inserted into the positioning hole (41), and the upper end surface of the upper supporting section (11) and the lower end surface of the lower supporting section (12) are attached to each other.

3. The outdoor shower apparatus according to claim 2, wherein the positioning post (31) is T-shaped and includes a fixed section close to its fixed end and a free section close to its free end, an outer diameter of the free section is greater than an outer diameter of the fixed section, and an outer side surface of the free section is provided with a plurality of notches (32) extending in the axial direction arranged at intervals along the circumferential direction; the positioning hole (41) is T-shaped and includes a hole bottom section close to its hole bottom and an opening section close to its holes, an inner diameter of the hole bottom section is larger than an inner diameter of the opening section, an inner side surface of the opening section is provided with a plurality of grooves (42) extending in the axial direction arranged at intervals along the circumferential direction; the opening section is sleeved in the free section, and the outer side surface of the free section is matched with the inner side surface of the opening section in a concave-convex engagement and has a degree of freedom of mutual movement in the axial direction; the outer side surface of the fixed section is mutually attached to a radial protrusion of the inner side surface of the opening section, and a radial protrusion of the outer side surface of the free section is mutually attached to the inner side surface of the hole bottom section. 5

4. The outdoor shower apparatus according to claim 2, wherein both the first joint structure and the second joint structure can be detachably connected to the supporting body (10). 10

5. The outdoor shower apparatus according to claim 4, wherein both the first joint structure and the second joint structure are connected to the supporting body (10) by screws. 15

6. The outdoor shower apparatus according to claim 1, wherein the upper supporting section (11) is provided with an upper water passage, the lower support section (12) is provided with a lower water passage, the upper water passage and the lower water passage are connected to form a water supply pipe, and a sealing ring (51) is provided between the upper supporting section (11) and the lower supporting section (12). 20

7. The outdoor shower apparatus according to claim 1, wherein the upper end surface of the lower supporting section (12) is provided with a positioning post (31) that is concentric with the lower supporting section (12), the positioning post (31) is provided with a lower water passing hole (33) that is concentric with the positioning post (31), and a sealing ring (51) surrounding the lower water passing hole (33) is provided on the free end surface of the positioning post (31); the lower end surface of the upper supporting section (11) is provided with a positioning hole (41) that is concentric with the upper supporting section (11), the positioning hole (41) is also provided with a water passing post (43) that is concentric with the positioning hole (41), the water passing post (43) is provided with an upper water passing hole (44) that is concentric with the water passing post (43), and the positioning post (31) is inserted into the positioning hole (33) and the water passing post (43) is inserted into the lower water passing hole (33); the free end surface of the positioning post (31) is mutually attached to a bottom of the positioning hole (41), and the upper end surface of the upper supporting section (11) is attached to the lower end surface of the lower supporting section (12); the lower supporting section (12) is provided with the lower water passage communicated with the lower water passing hole (33), and the upper supporting section (11) is provided with the upper water passage communicated with the upper water passing hole (44), and the upper water passage and the lower water passage are connected to form the water supply pipe. 25

8. The outdoor shower apparatus according to claim 1, wherein the valve (22) and the faucet (23) are arranged one above the other and installed on the lower supporting section (12). 30

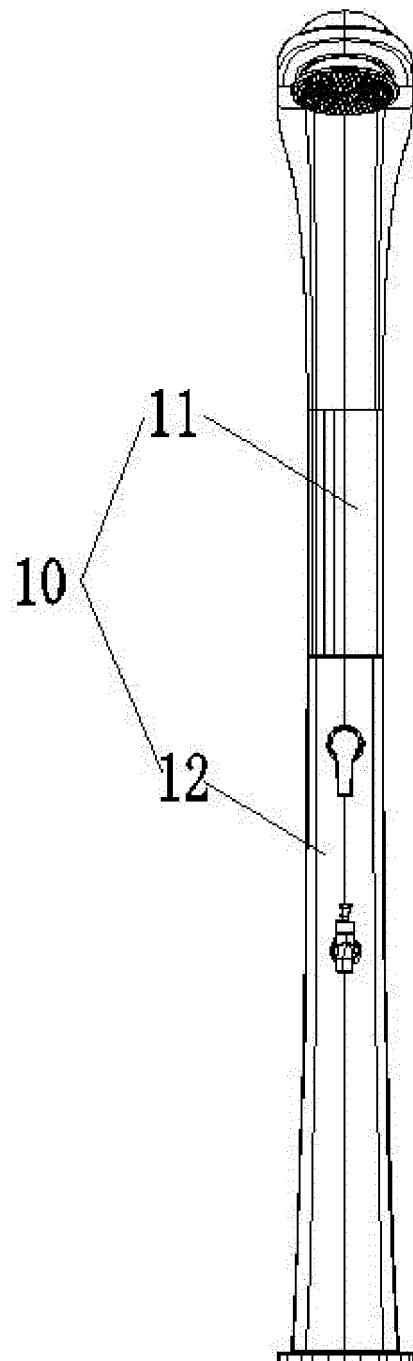
9. The outdoor shower apparatus according to claim 1, wherein the supporting body (10) is in the shape of an inverted golf club. 35

10. The outdoor shower apparatus according to claim 1, wherein both the upper supporting section (11) and the lower supporting section (12) are formed by rotational molding. 40

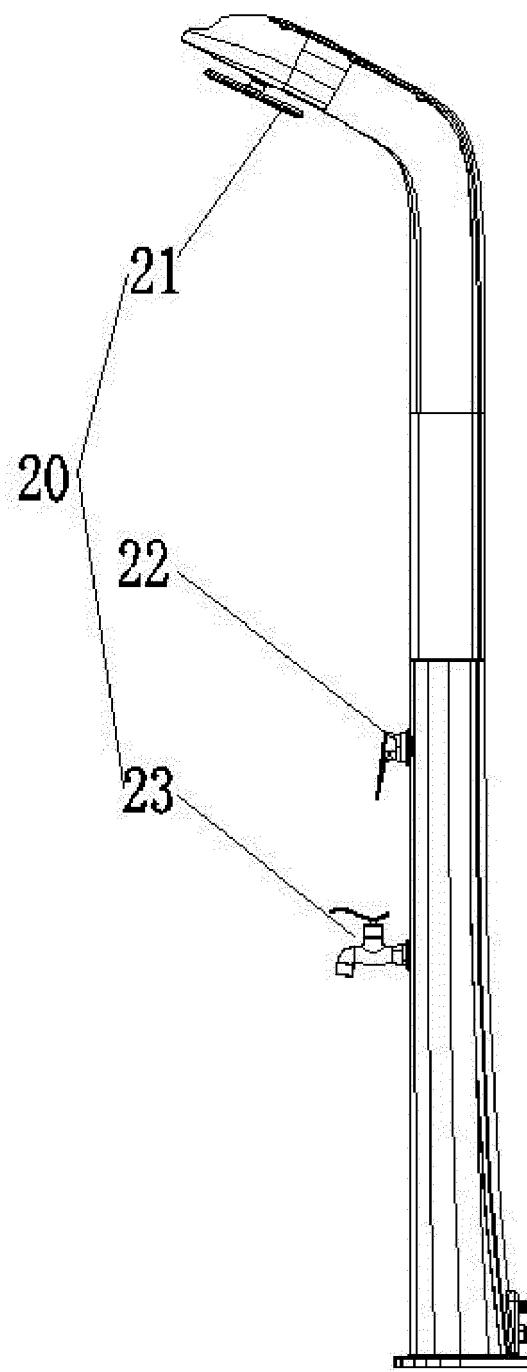
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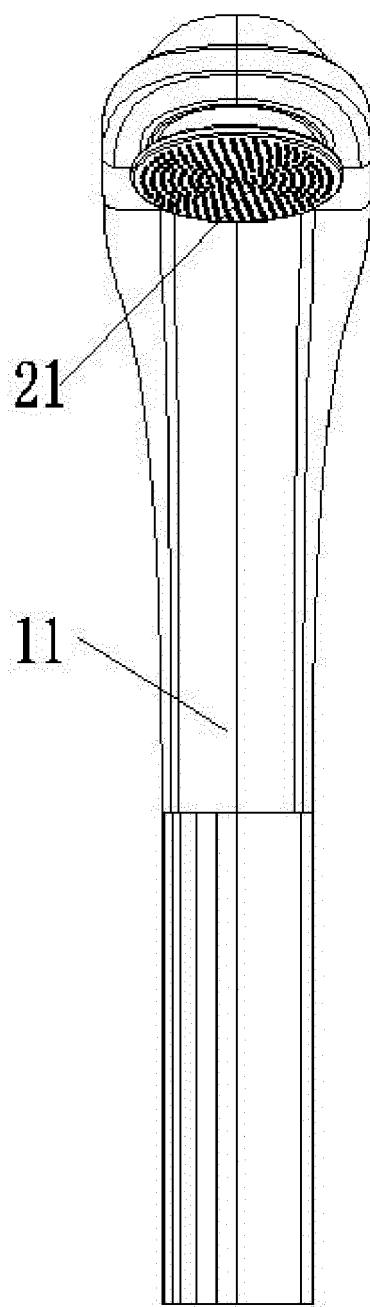
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**FIG. 1**



**FIG. 2**



**FIG. 3**

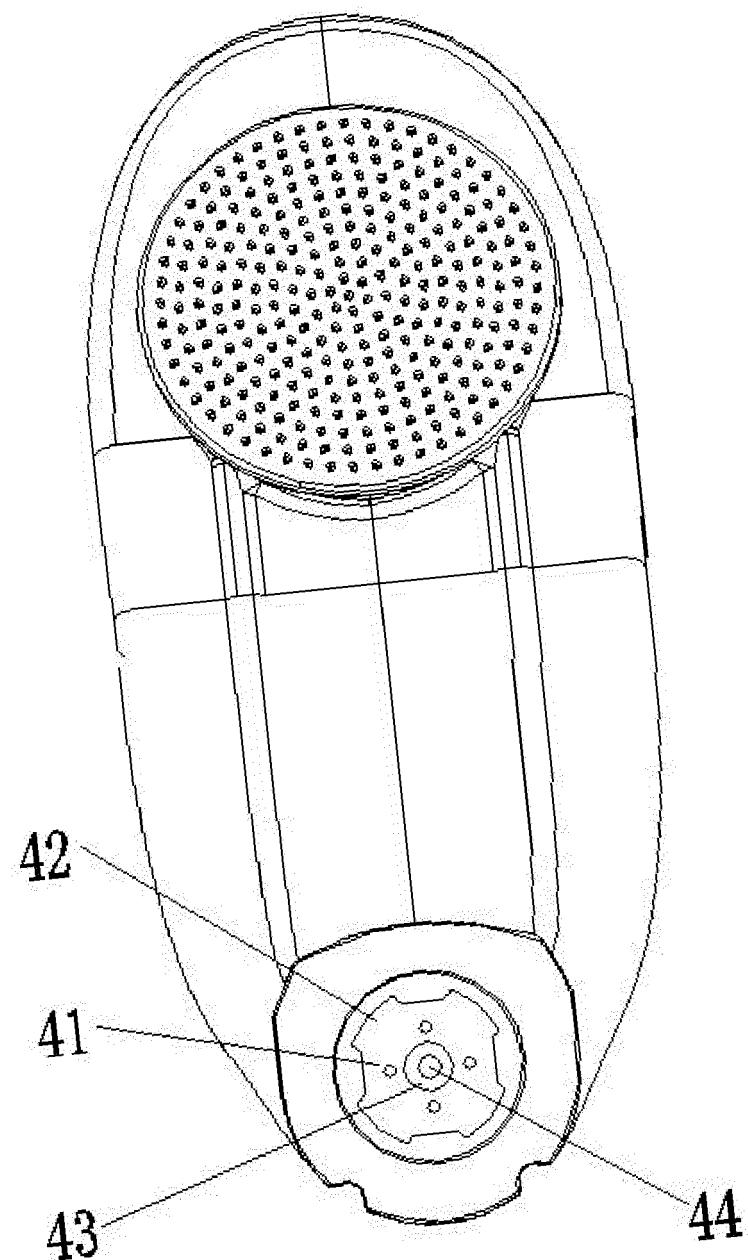
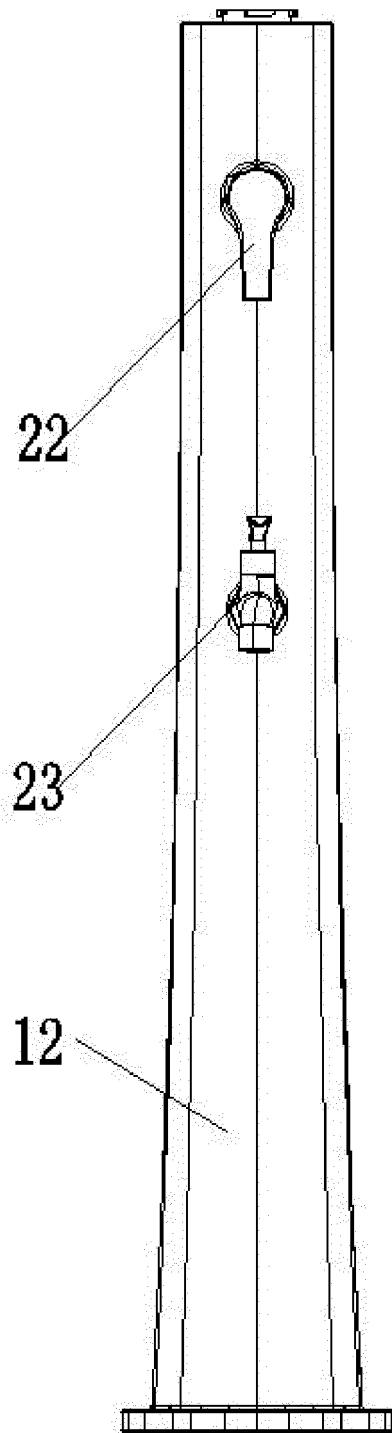
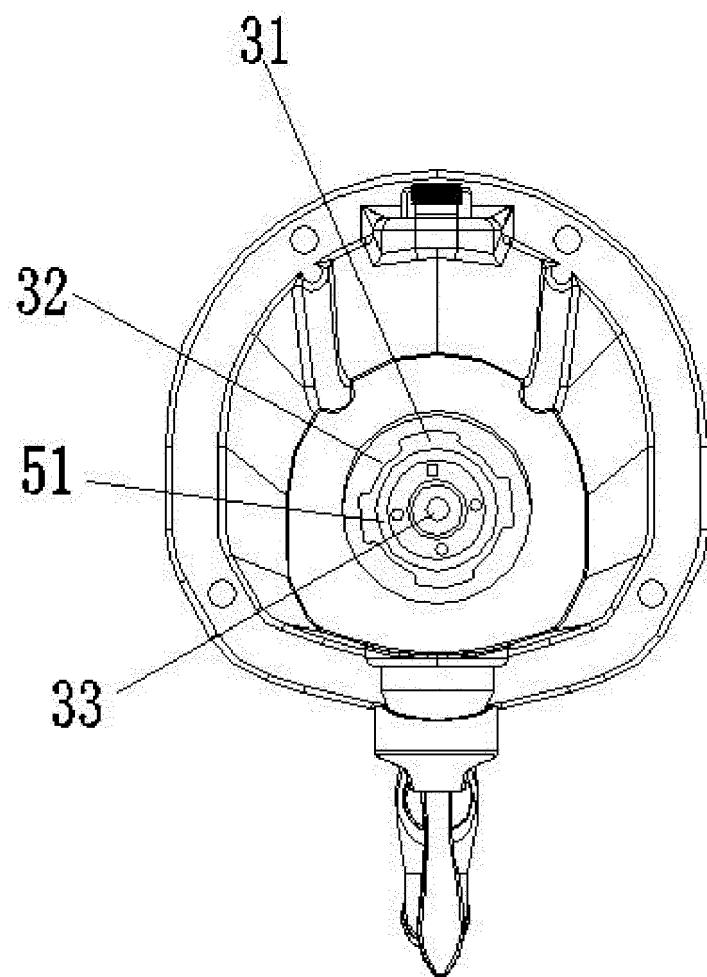


FIG. 4



**FIG. 5**



**FIG. 6**

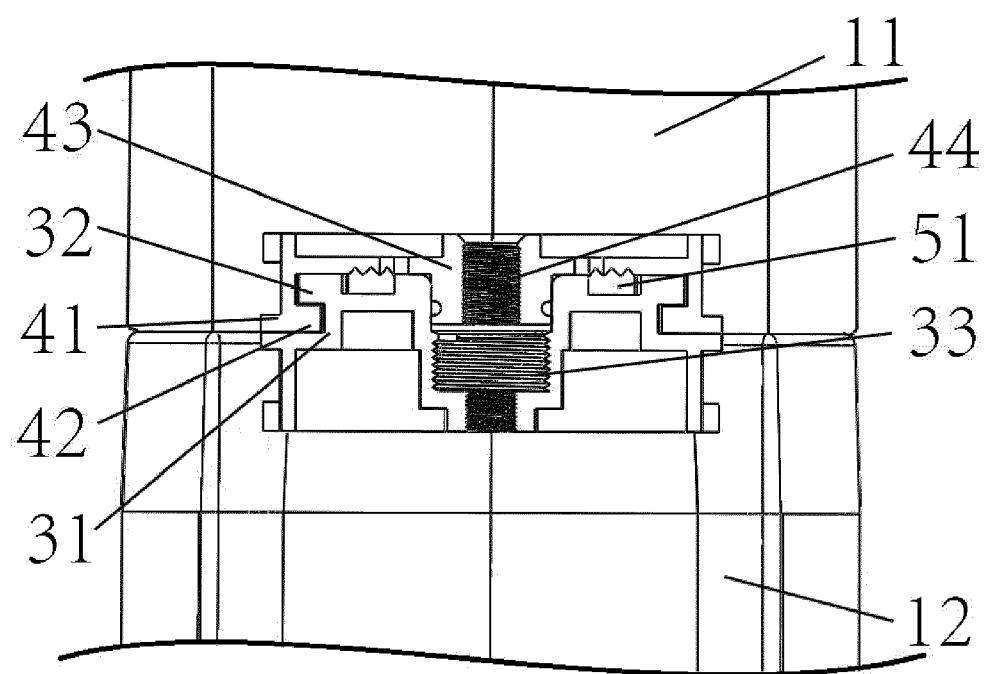


FIG. 7



## EUROPEAN SEARCH REPORT

Application Number

EP 21 18 2629

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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	FR 2 933 860 A1 (HT POOL FRANCE [FR]) 22 January 2010 (2010-01-22) * the whole document *	1,2,4-6, 8,10 9	INV. A47K3/28
X	US 2010/012748 A1 (TSAI JYH-HSIN [CN] ET AL) 21 January 2010 (2010-01-21) * column 2 - column 4; figures 1,2,3 *	1,6,8 9 3,7	
Y	CN 108 784 474 A (ZHENG SIHANG) 13 November 2018 (2018-11-13) * figures 1,2 *	9	
A	US 5 983 419 A (CARROLL JON ROBERT [US]) 16 November 1999 (1999-11-16) * the whole document *	1	
A	CN 201 098 053 Y (NINGBO BODA PLASTIC INDUSTRY C [CN]) 13 August 2008 (2008-08-13) * figure 3 *	3,7	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47K E03C
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
50	Munich	2 December 2021	Horst, Werner
CATEGORY OF CITED DOCUMENTS			
55	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	

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

EP 21 18 2629

5 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  
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02-12-2021

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	FR 2933860 A1	22-01-2010	NONE	
15	US 2010012748 A1	21-01-2010	NONE	
	CN 108784474 A	13-11-2018	NONE	
20	US 5983419 A	16-11-1999	NONE	
	CN 201098053 Y	13-08-2008	NONE	
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