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(54) CLEANING BUCKET AND CLEANING KIT COMPRISING SAME

(57) The invention relates to a cleaning bucket and a cleaning kit using same. The cleaning bucket includes a bucket body; a partition is provided in the bucket body; the partition partitions a water storage space in the bucket body into a clean water area and a cleaning area; a water pumping mechanism is further provided in the bucket body; a water inlet end of the water pumping mechanism communicates with the clean water area and a water outlet end of the water pumping mechanism communicates with the cleaning area. According to the invention, the partition horizontally partitions the water storage space in the bucket body into the clean water area and the cleaning area, and the clean water area and the cleaning area are integrally designed, so that the bucket body can store clean water and dirty water independently by only one bucket, and disassembling and assembling are not required, thereby achieving less cost and disassembling and assembling labor than a case where two buckets are required.

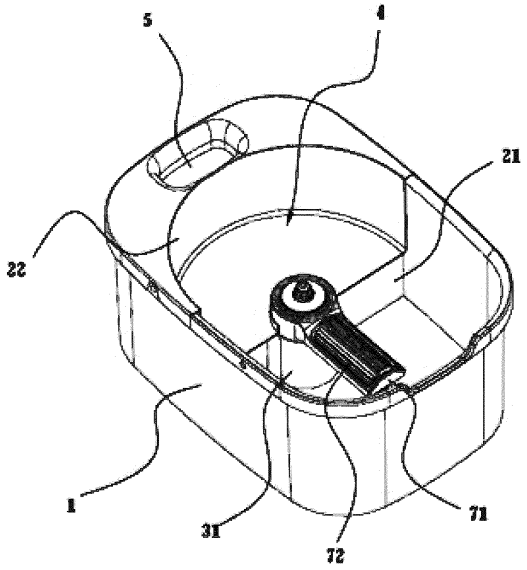

FIG. 1

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Description

Technical Field

[0001] The invention belongs to the technical field of cleaning tools, and relates to a cleaning bucket and a cleaning kit using the same.

Background of the Invention

[0002] When an existing cleaning tool performs cleaning, clean water is used at the beginning. With the cleaning process, the clean water becomes dirty water, and the dirty water and the clean water cannot be separated. Therefore, as the cleaning process goes on, water in a mop bucket becomes more and more dirty, and the effect of continuous cleaning cannot be achieved. Water can only be poured out, and a cleaning bucket is usually used now. However, there are at least two buckets in an existing clean and dirty water separation bucket, and a clean water bucket and a dirty water bucket are independent and required to be disassembled.

Summary of the Invention

[0003] In view of the above problem in the related art, an objective of the invention is to provide an integrated clean and dirty water separation bucket without assembling and disassembling.

[0004] The objective of the invention can be achieved by the following technical solution: a cleaning bucket includes a bucket body, a partition is provided in the bucket body, and the partition partitions a water storage space in the bucket body into a clean water area and a cleaning area, a water pumping mechanism is further provided in the bucket body, a water inlet end of the water pumping mechanism communicates with the clean water area, a water outlet end of the water pumping mechanism communicates with the cleaning area, the partition includes a cover plate provided on the bucket body, and the cover plate divides the bucket body into the clean water area and the cleaning area.

[0005] The partition horizontally partitions the water storage space in the bucket body into the clean water area and the cleaning area, and the clean water area and the cleaning area are integrally designed, so that the bucket body can store clean water and dirty water independently by only one bucket, and disassembling and assembling are not required, thereby achieving less cost and disassembling and assembling labor than a case where two buckets are required.

[0006] In the cleaning bucket, the partition further includes a partition plate provided at the bottom of the bucket body, and the cover plate, the partition plate and the bucket body form the clean water area. The cover plate can close the top of the clean water area and can effectively prevent dirty water in the cleaning area from being sputtered into the clean water area from the top in the cleaning process of a mop, thereby preventing clean water in the clean water area from being polluted.

[0007] In the cleaning bucket, a clearance space is formed above the clean water area, and the cover plate is bent to form the clearance space. The clearance space is configured to accommodate a to-be-cleaned mop, so that the space in the cleaning area is larger than the clean water area, and more dirty water can be stored in the cleaning area.

[0008] In the cleaning bucket, the bottom of the cover plate is provided obliquely, so that dirty water after cleaning performed by the cleaning assembly can flow to the bottom of the cleaning area through the oblique cover plate, thereby preventing the dirty water from being accumulated in the clearance space.

[0009] In the cleaning bucket, the cover plate is provided with a water injection hole for injecting clean water into the clean water area. In the cleaning process of the bucket, the water pumping mechanism pumps the clean water into the bottom of the mop from the clean water area, so that the clean water in the clean water area is reduced continuously. The water injection hole can make a worker continuously inject clean water into the clean water area from the water injection hole.

[0010] In the cleaning bucket, the cover plate is clamped to a side edge of the bucket body through a covered edge provided on a side part of the cover plate. The partition plate is clamped to the side edge of the bucket body in a covered edge manner, so that a cleaning disk can be assembled and disassembled rapidly, and water in the clean water area and the cleaning area can be treated after disassembling.

[0011] In the cleaning bucket, the water pumping mechanism includes a water collecting cylinder provided in the bucket body, and an upper shaft rotatably connected to an interior of the bucket body, a lower side of the upper shaft is provided with a lower shaft rotatably connected to the bucket body, the upper shaft is connected to a water intaking plate, the water intaking plate is spirally provided, and a disengaging and engaging mechanism capable of disengaging or engaging the upper shaft and the water intaking plate is connected between the upper shaft and the water intaking plate.

[0012] In the cleaning bucket, the disengaging and engaging mechanism includes two gear rings that are respectively provided at a lower end of the upper shaft and an upper end of the lower shaft, the two gear rings are capable of being meshed and connected, the disengaging and engaging mechanism further includes a lifting column, the lifting column is provided hollowly and slidingly connected to the water collecting cylinder, the upper shaft is provided in the top of the lifting column and extends into the water collecting cylinder, and the lower shaft is located in the water collecting cylinder.

[0013] In the cleaning bucket, a clamping mechanism is provided on an outer surface of the lifting column, the clamping mechanism includes a ferrule located on an outer side of the lifting column and slidingly connected

to the lifting column, a sliding rail is provided on an outer surface of the lifting column, an upper abutment surface and a lower abutment surface are provided on the sliding rail, the upper abutment surface and the lower abutment surface are connected through a connecting channel, an abutment block sliding in the sliding rail is provided on an inner wall of the ferrule, and the abutment block is capable of abutting against the upper abutment surface and the lower abutment surface.

[0014] Another objective of the invention is to provide a cleaning kit using a cleaning bucket, including the cleaning bucket and a cleaning tool, where a cleaning assembly capable of cleaning the cleaning tool is provided in the bucket body of the cleaning bucket and located above the water pumping mechanism.

[0015] The cleaning assembly includes a mounting frame provided on a side part of a water pumping mechanism, and a cleaning roll capable of rotating around a central axis thereof is provided on the mounting frame.

[0016] Compared with the related art, the invention has the following advantages: the partition horizontally partitions the water storage space in the bucket body into the clean water area and the cleaning area, and the clean water area and the cleaning area are integrally designed, so that the bucket body can store clean water and dirty water independently by only one bucket, and disassembling and assembling are not required, thereby achieving less cost and disassembling and assembling labor than a case where two buckets are required.

Brief description of the Drawings

[0017]

FIG. 1 is a schematic diagram of a three-dimensional structure according to the invention;
FIG. 2 is a sectional view according to the invention;
FIG. 3 is a schematic diagram of a bucket body structure according to the invention;
FIG. 4 is a schematic diagram of an overall structure according to the invention;
FIG. 5 is a schematic structural diagram of a lifting column; and
FIG. 6 is a schematic diagram of connection between an upper shaft and a lower shaft.

[0018] In the drawings, 1. bucket body; 11. clean water area; 12. cleaning area; 2. partition; 21. partition plate; 22. cover plate; 3. water pumping mechanism; 4. clearance space; 5. water injection hole; 6. covered edge; 7. cleaning assembly; 71. mounting frame; 72. cleaning roll; 8. arc-shaped part; 9. mounting disk; 10. arc-shaped groove; 13. water outlet; 14. water inlet; 16. water collecting cylinder; 18. water intaking plate; 19. upper shaft; 20. lower shaft; 21. gear ring; 23. lifting column; 24. mop clamping head; 25. shelf disk; 26. coaxial groove; 27. coaxial rod; 28. ferrule; 29. upper abutment surface; 30. lower abutment surface; 31. connecting channel; 32. abutment block; 35. buckling rod; 36. buckling groove.

Detailed Description of Embodiments

[0019] The technical solutions of the invention are further described below with reference to the specific embodiments of the invention and the accompanying drawings, but the invention is not limited to these embodiments.

[0020] As shown in FIG. 1 to FIG. 6, a cleaning bucket and a cleaning kit using the same, the cleaning bucket includes a bucket body 1, a partition 2 is provided in the bucket body 1, the partition 2 partitions a water storage space in the bucket body 1 into a clean water area 11 and a cleaning area 12, and the partition 2 horizontally partitions the water storage space in the bucket body 1 into the clean water area 11 and the cleaning area 12, and the clean water area 11 and the cleaning area 12 are integrally designed, so that the bucket body 1 can store clean water and dirty water independently by only one bucket, and disassembling and assembling are not required, thereby achieving less cost and disassembling and assembling labor than a case where two buckets are required.

[0021] The partition 2 includes a partition plate 21 provided at the bottom of the bucket body 1, and a cover plate 22 provided on the bucket body 1. The cover plate 22, the partition plate 21 and the bucket body 1 form the clean water area 11. The cover plate 22 can close the top of the clean water area 11 and can effectively prevent dirty water in the cleaning area 12 from being sputtered into the clean water area 11 from the top in the cleaning process of a mop, thereby preventing clean water in the clean water area 11 from being polluted.

[0022] A clearance space 4 is formed above the clean water area 11, and the cover plate 22 is bent to form the clearance space 4. The clearance space 4 is configured to accommodate a to-be-cleaned mop, so that the space in the cleaning area 12 is larger than the clean water area 11, and more dirty water can be stored in the cleaning area 12.

[0023] The bottom of the cover plate 22 is provided obliquely, so that dirty water after cleaning performed by the cleaning assembly 7 can flow to the bottom of the cleaning area 12 through the oblique cover plate 22, thereby preventing the dirty water from being accumulated in the clearance space 4.

[0024] The cover plate 22 is provided with a water injection hole 5 for injecting clean water into the clean water area 11. In the cleaning process of the bucket, the water pumping mechanism 3 pumps the clean water into the bottom of the mop from the clean water area 11, so that the clean water in the clean water area 11 is reduced continuously. The water injection hole 5 can make a worker continuously inject clean water into the clean water area 11 from the water injection hole 5.

[0025] The cover plate 22 is clamped to a side edge of the bucket body 1 through a covered edge 6 provided

on a side part of the cover plate. The partition plate 21 is clamped to the side edge of the bucket body 1 in a covered edge 6 manner, so that a cleaning disk can be assembled and disassembled rapidly, and water in the clean water area 11 and the cleaning area 12 can be treated after disassembling.

[0026] An arc-shaped part 8 attached to a surface of the water pumping mechanism 3 is provided on the partition plate 21. The arc-shaped part 8 is attached to the surface of the water pumping mechanism 3, so that the contact area between the water pumping mechanism 3 and the partition plate 21 can be increased, thereby reducing vibration generated when the water pumping mechanism 3 is started and improving the overall stability of a clean and dirty water separated bucket.

[0027] A mounting disk 9 for mounting the water pumping mechanism 3 is provided at the bottom of the clean water area 11, the mounting disk 9 is provided with an arc-shaped groove 10 for clamping the water pumping mechanism 9, and the water pumping mechanism 3 is fixed to the mounting disk 9 through a bolt. The arc-shaped groove 10 is configured to clamp the bottom of the water pumping mechanism 3 and position the water pumping mechanism 3, so that it is only necessary to clamp the bottom of the water pumping mechanism into the arc-shaped groove 10 during the mounting of the water pumping mechanism, thereby achieving rapid mounting of the water pumping mechanism 3.

[0028] The water pumping mechanism 3 is further provided in the bucket body 1, the water pumping mechanism 3 includes a water collecting cylinder 16 provided in the bucket body 1 and an upper shaft 19 rotatably connected to the bucket body 1, a disengaging and engaging mechanism is provided between the upper shaft 19 and a lower shaft 20, and a water intaking plate 18 is fixedly connected to the lower shaft 20.

[0029] The upper shaft 19 is connected to the water intaking plate 18, a water inlet 14 is formed at the bottom of the water collecting cylinder 16, the water intaking plate 18 is located in the water collecting cylinder 16, the water intaking plate 18 provided spirally, and the disengaging and engaging mechanism capable of disengaging or engaging the upper shaft 19 and the water intaking plate 18 is connected between the upper shaft 19 and the water intaking plate 18.

[0030] A lower side of the upper shaft 19 is provided with the lower shaft 20 rotatably connected to bucket body 1. In the invention, the upper shaft 19 can move up and down axially. When a mop is cleaned, the upper shaft 19 is located at a lower side position, abuts against the lower shaft 20 and is clamped to the lower shaft 20, and the rotation of the upper shaft 19 drives the lower shaft 20 to rotate so as to make water flow upwards. When the mop is scraped, the upper shaft 19 is located at an upper side position and is disconnected to the lower shaft 20, and at this time, the rotation of the upper shaft 19 will not drive the lower shaft 20 to rotate.

[0031] The disengaging and engaging mechanism includes two gear rings 21 that are respectively provided at a lower end of the upper shaft 19 and an upper end of the lower shaft 20. The two gear rings 21 are capable of being meshed and connected. In the invention, the two gear rings 21 are embedded mutually and clamped through the upper shaft 19 and the lower shaft 20.

[0032] The disengaging and engaging mechanism further includes a lifting column 23, the lifting column 23 is provided hollowly and slidingly connected to the water collecting cylinder 16, the upper shaft 19 is provided inside the top of the lifting column 23 and extends into the water collecting cylinder 16, and the lower shaft 20 is located in the water collecting cylinder 16.

[0033] In the invention, the water collecting cylinder 16 serves as a baffle and a water outlet channel, and an outer end face of the water intaking plate 18 abuts against an inner wall of the water collecting cylinder 16. In the rotation process of water intaking plate 18, water is pushed upwards by a spiral structure of the water intaking plate 18, and water flows through the water inlet 14 from the bottom of the water collecting cylinder 16 to an interior of the water collecting cylinder 16. In addition, the upper shaft 19 is disconnected and connected to the lower shaft 20 through the ascending and descending of the lifting column 23.

[0034] A clamping mechanism is provided on an outer surface of the lifting column 23, the clamping mechanism includes a ferrule 28 located on an outer side of the lifting column 23 and slidingly connected to the lifting column 23, a sliding rail is provided on an outer surface of the lifting column 23, the sliding rail is provided with an upper abutment surface 29 and a lower abutment surface 30, the upper abutment surface 29 and the lower abutment surface 30 are connected through a connecting channel 31, an abutment block 32 sliding in the sliding rail is provided on an inner wall of the ferrule 28, and the abutment block 32 can abut against the upper abutment surface 29 and the lower abutment surface 30.

[0035] In the invention, when the upper shaft 19 is connected and disconnected to the lower shaft 20, and the lifting column 23 and the ferrule 28are clamped together through the clamping mechanism, thereby limiting the lifting column 23 and preventing the lifting column from moving up and down during work. The connecting channel 31 is provided obliquely, and the upper abutment surface 29 and the lower abutment surface 30 are located at an upper end and a lower end of the connecting channel 31, respectively. In the connection process of the upper shaft 19和 and the lower shaft 20, the lifting column 23 drives the upper shaft 19 to move downwards, so that the abutment block 32 slides on the connecting channel 31. In the sliding process, the lifting column 23 will rotate. After the lifting column 23 moves to a lower side limit position, and the upper shaft 19 and the lower shaft 20 are meshed and connected, the abutment block 32 abuts against the upper abutment surface 29, and then the lifting column 23 is slightly rotated, so that the abutment

block 32 slides on the upper abutment surface 29, and the abutment block 32 slides into the lifting column 23 and is clamped with the lifting column 23. In the disconnecting process of the upper shaft 19 and the lower shaft 20, the lifting column 23 drives the upper shaft 19 to move upwards, so that the abutment block 32 slides on the connecting channel 31. In the sliding process, the lifting column 23 will be rotated. After the lifting column 23 moves to an upper side limit position, and the upper shaft 19 is disconnected to the lower shaft 20, the abutment block 32 abuts against the lower abutment surface 30, and then the lifting column 23 is slightly rotated, so that the abutment block 32 slides on the lower abutment surface 30, and the abutment block 32 slides into the lifting column 23 and is clamped with the lifting column 23. In addition, the upper shaft 19 is rotatably connected to the lifting column 23. Furthermore, when the upper shaft 19 works, whether the upper shaft 19 is in a cleaning state or a scraping state, the rotation direction of the upper shaft is the same as the direction of the abutment block 32 extending into the lifting column 23, so that the abutment block 32 will not be disconnected to the upper abutment surface 29 or the lower abutment surface 30, and the abutment block 32 and the lifting block 23 are still clamped.

[0036] An upper end of the lifting column 23 is further convexly provided with a mop clamping head 24, and the mop clamping head 24 and the upper shaft 19 are coaxially provided.

[0037] A cleaning assembly 7 capable of cleaning a cleaning tool is provided in the bucket body 1 of the cleaning bucket and located above the water pumping mechanism 3, the cleaning assembly 7 includes a mounting frame 71 provided on a side part of the water pumping mechanism 3, and a cleaning roll 72 capable of rotating around a central axis thereof is provided on the mounting frame 71.

[0038] In the invention, when the mop is cleaned and scraped, the mop is placed on the lifting column 23 and is clamped with the mop clamping head 24, the rotation power of the upper shaft 19 is from an interior of the mop, and a mop head rotates so as to rotate the upper shaft 19. The rotation of the mop head may be: manually rotating the mop, or may be: providing a rotating motor connected to the mop head in the mop.

[0039] A shelf disk 25 is provided at the top of the lifting column 23, the mop clamping head 24 and the upper shaft 19 are respectively provided on an upper end face and a lower end face of the shelf disk 25, and a water outlet ring including several water outlets 13 and provided on the shelf disk 25 is provided on an outer side of the mop clamping head 24.

[0040] In the invention, during cleaning work, water in the water collecting cylinder 16 flows upwards with the rotation of the water intaking plate 18, flows out through the water outlets 13 and then is splashed on the mop head.

[0041] Optionally, the water outlets 13 are bent, and outlets of the water outlets 13 are provided horizontally as much as possible, so that water can be sprayed to an outer end of the mop head when flowing out of the water outlets 13.

[0042] An axial groove 26 is formed in the upper shaft 19, and the lower shaft 20 is provided with a coaxial rod 27 slidingly connected to the coaxial groove 26. In the invention, the coaxial rod 27 slides in the coaxial groove 26, so that the movement direction of the upper shaft 19 can be limited, cooperation is facilitated, and the structure is more stable.

[0043] The mop clamping head 24 is fixedly connected to the upper shaft 19, the upper shaft 19 is sliding connected to the shelf disk 25, several buckling rods 35 are provided on a lower end face of the shelf disk 25, the buckling rods 35 have deformability, the upper shaft 19 is provided with several clamping grooves 36 in one-to-one correspondence with the buckling rods 35, and the buckling rods 35 extend into the corresponding buckling grooves 36 and are clamped with the buckling grooves.

[0044] In the invention, the upper shaft 19 can be taken out, thereby facilitating disassembling and assembling. Furthermore, when a combined part of the upper shaft 19 and the lower shaft 20 is damaged, replacement is facilitated.

[0045] The working principle of the invention is: the mop is placed on the lifting column 23 and clamped with the mop clamping head 24, the mop is pressed down by hands, so that the lifting column 23 drives the upper shaft 19 to move downwards, and the abutment block 32 slides on the connecting channel 31. In the sliding process, the lifting column 23 will be rotated. After the lifting column 23 moves to a lower side limit position, and the upper shaft 19 and the lower shaft 20 are meshed and connected, the abutment block 32 abuts against the upper abutment surface 29, and then the lifting column 23 is slightly rotated, so that the abutment block 32 slides on the upper abutment surface 29, and the abutment block 32 slides into the lifting column 23 and is clamped with the lifting column 23. At this time, the upper shaft 19 and the lower shaft 20 are meshed and connected and in a cleaning state, the mop head rotates to make the upper shaft 19 drive the lower shaft 20 to rotate, and the rotation of the water intaking plate 18 drives water to flow spirally upwards, so that water the splashed on the mop, and the mop head is cleaned by the cleaning assembly 7. Water after cleaning can automatically flow into a second water outlet area from the cover plate 22, so that clean and dirty water can be separated automatically. After cleaning, the mop is moved upwards by hands, so that the lifting column 23 drives the upper shaft 19 to move upwards, and the abutment block 32 slides on the connecting channel 31. In the sliding process, the lifting column 23 will be rotated. After the lifting column 23 moves to an upper side limit position, and the upper shaft 19 and the lower shaft 20 are disconnected, the abutment block 32 abuts against the lower abutment surface 30, and then the lifting column 23 is slightly rotated, so that the abut-

ment block 32 slides on the lower abutment surface 30, and the abutment block 32 slides into the lifting column 23 and is clamped with the lifting column 23. At this time, the upper shaft 19 and the lower shaft 20 are disconnected. When the mop head rotates, water will not flow upwards, and the mop head is scraped dry by a water scraping piece.

[0046] Compared with the related art, the invention has the advantages that the partition 2 horizontally partitions the water storage space in the bucket body 1 into the clean water area 11 and the cleaning area 12, and the clean water area 11 and the cleaning area 12 are integrally designed, so that the bucket body 1 can store clean water and dirty water independently by only one bucket, and disassembling and assembling are not required, thereby achieving less cost and disassembling and assembling labor than a case where two buckets are required.

[0047] The specific embodiments described herein merely illustrate the spirit of the invention. A person skilled in the art to which the invention belongs can make various modifications or supplements on the described specific embodiments or substitute them in a similar way, without departing from the spirit of the invention or exceeding the scope defined by the appended claims.

Claims

1. A cleaning bucket, comprising a bucket body (1), **characterized in that** , a partition (2) is provided in the bucket body (1), the partition (2) partitions the bucket body (1) into a clean water area (11) and a cleaning area (12), a water pumping mechanism (3) is further provided in the bucket body (1), a water inlet end of the water pumping mechanism (3) communicates with the clean water area (11), and a water outlet end of the water pumping mechanism communicates with the cleaning area (12), the partition (2) comprises a cover plate (22) provided on the bucket body, and the cover plate (22) divides the bucket body into the clean water area (11) and the cleaning area (12).

2. The cleaning bucket according to claim 1, **characterized in that** the partition (2) further comprises a partition plate (21) provided at the bottom of the bucket body(1), and the cover plate (22), the partition plate (21) and the bucket body (1) form the clean water area (11) .

3. The cleaning bucket according to claim 2, **characterized in that** a clearance space (4) is provided above the clean water area (11), and the cover plate (22) is bent to form the clearance space (4).

4. The cleaning bucket according to claim 2 or 3, **characterized in that** the bottom of the cover plate (22) is provided obliquely.

5. The cleaning bucket according to claim 2 or 3, **characterized in that** the cover plate (22) is provided with a water injection hole (5) for injecting clean water into the clean water area (11).

6. The cleaning bucket according to claim 2 or 3, **characterized in that** the cover plate (22) is clamped to a side edge of the bucket body (1) through a covered edge (6) provided on a side part of the cover plate.

7. The cleaning bucket according to claim 1, 2 or 3, **characterized in that** the water pumping mechanism (3) comprises a water collecting cylinder (16) provided in the bucket body, and an upper shaft (19) rotatably connected to an interior of the bucket body (1), a lower side of the upper shaft (19) is provided with a lower shaft (20) rotatably connected to the bucket body (1), the upper shaft (19) is connected to a water intaking plate (18), the water intaking plate (18) is spirally provided, and a disengaging and engaging mechanism capable of disengaging or engaging the upper shaft (19) and the water intaking plate (18) is connected between the upper shaft (19) and the water intaking plate (18).

8. The cleaning bucket according to claim 7, **characterized in that** the disengaging and engaging mechanism comprises two gear rings(21) that are respectively provided at a lower end of the upper shaft (19) and an upper end of the lower shaft (20), the two gear rings (21) are capable of being meshed and connected, the disengaging and engaging mechanism further comprises a lifting column (23), the lifting column (23) is provided hollowly and slidingly connected to the water collecting cylinder (16), the upper shaft (19) is provided in the top of the lifting column (23) and extends into the water collecting cylinder (16), and the lower shaft (20) is located in the water collecting cylinder (16).

9. The cleaning bucket according to claim 8, **characterized in that** a clamping mechanism is provided on an outer surface of the lifting column (23), the clamping mechanism comprises a ferrule (28) located on an outer side of the lifting column (23) and slidingly connected to the lifting column (23), a sliding rail is provided on an outer surface of the lifting column (23), an upper abutment surface (29) and a lower abutment surface (30) are provided on the sliding rail, the upper abutment surface (29) and the lower abutment surface (30) are connected through a connecting channel (31), an abutment block (32) sliding in the sliding rail is provided on an inner wall of the ferrule (28), and the abutment block (32) is capable of abutting against the upper abutment surface (29) and the lower abutment surface (30).

10. A cleaning kit using the cleaning bucket according to claims 1-9, comprising the cleaning bucket and a cleaning tool, wherein a cleaning assembly (7) capable of cleaning the cleaning tool is provided in the bucket body (1) of the cleaning bucket and located above the water pumping mechanism (3).

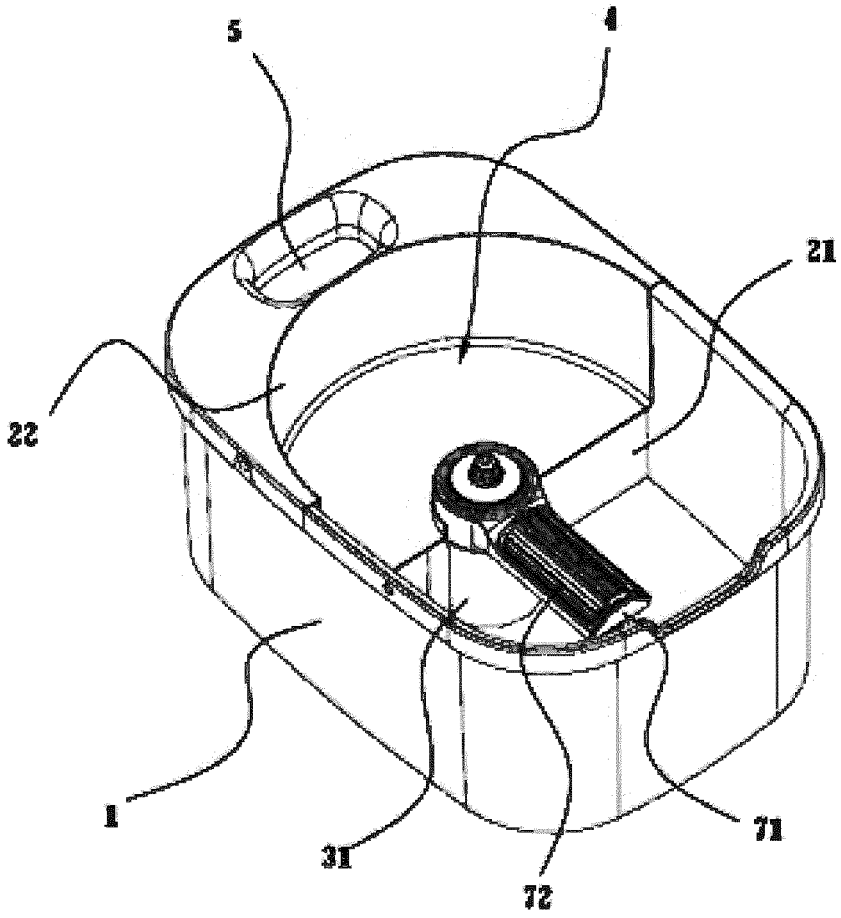

FIG. 1

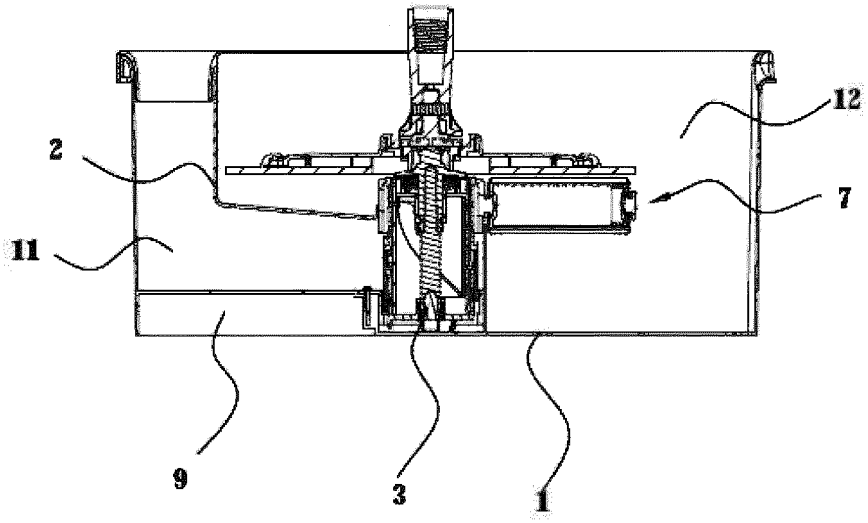

FIG. 2

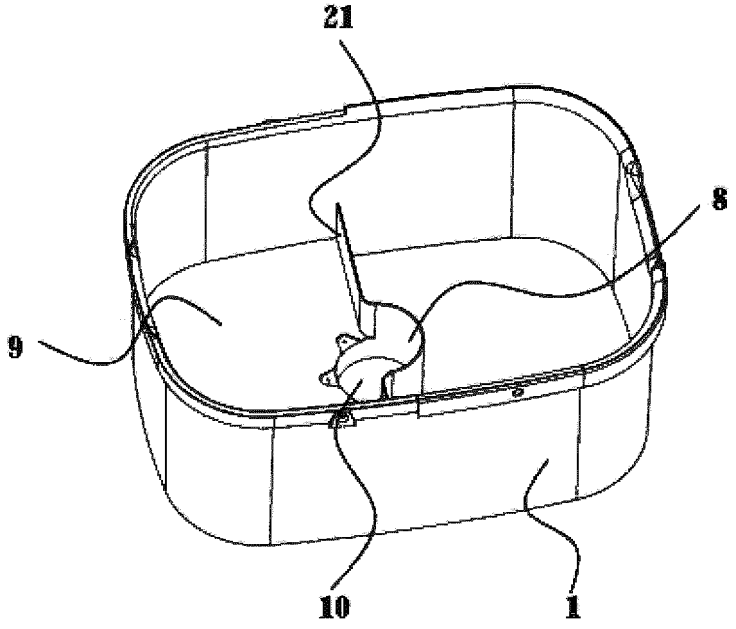

FIG. 3

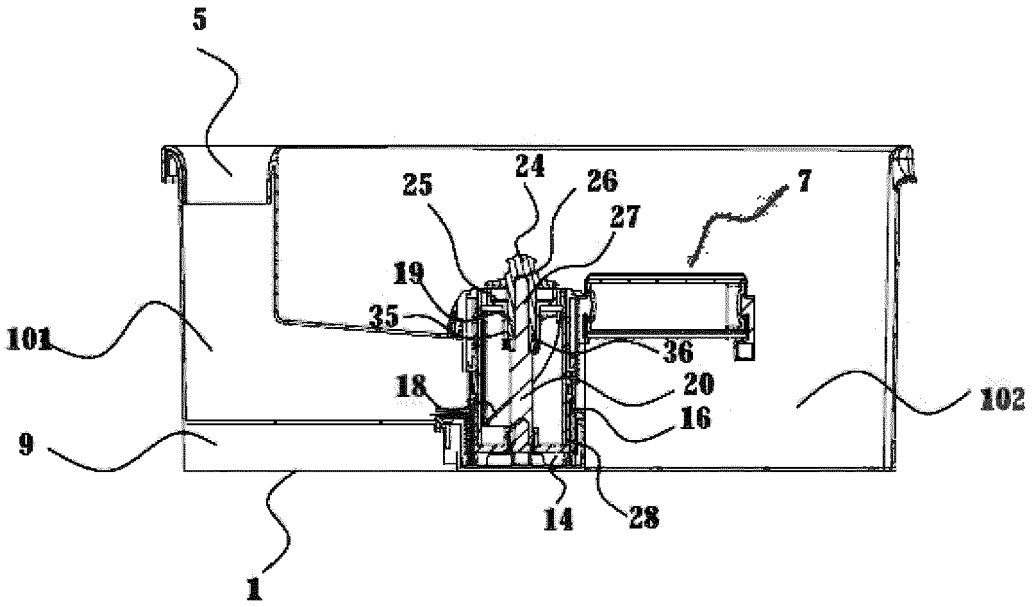

FIG. 4

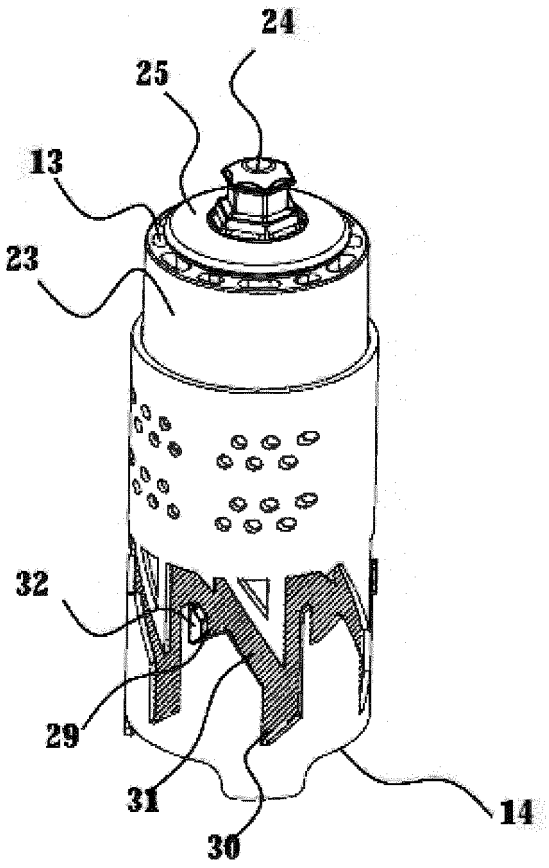

FIG. 5

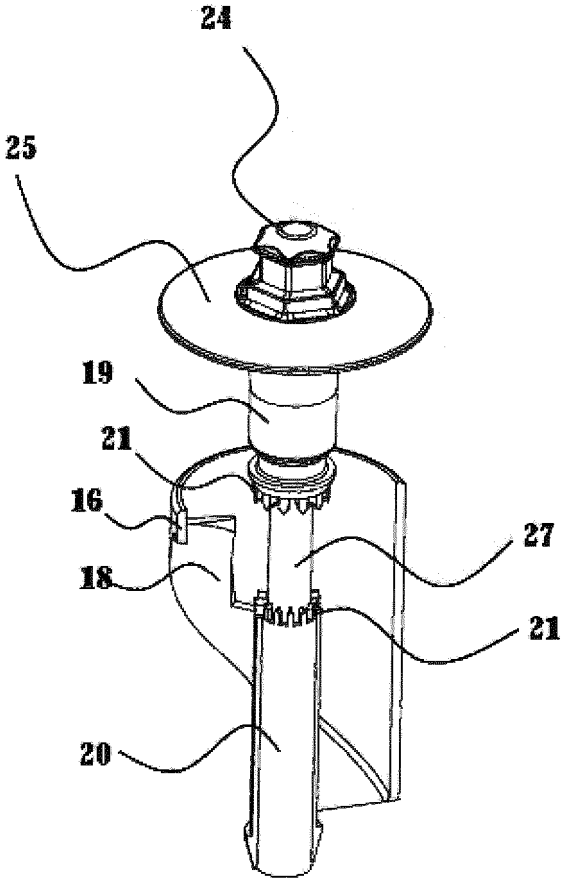

FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2022/102572

A. CLASSIFICATION OF SUBJECT MATTER

A47L 13/58(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)

A47L

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

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

CNPAT, WPI, EPODOC, CNKI: 嘉兴捷顺, 拖布, 拖把, 清洗, 清洁, 桶, 分隔, 隔离, 离合, 齿轮, 升降, 旋转, 转动, 泵, 泵水, 运送, 污水, 净水, 清水, 干净, 清洗, mop, swab, rotat+, bump, gear, clean, launder, water, separate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 215838885 U (JIAXING JACKSON TRAVEL PRODUCTS CO., LTD.) 18 February 2022 (2022-02-18) claims 1-10	1-10
X	CN 108451460 A (JIAXING JACKSON TRAVEL PRODUCTS CO., LTD.) 28 August 2018 (2018-08-28) description, paragraphs [0028]-[0047], and figures 1-6	1-6, 10
Y	CN 108451460 A (JIAXING JACKSON TRAVEL PRODUCTS CO., LTD.) 28 August 2018 (2018-08-28) description, paragraphs [0028]-[0047], and figures 1-6	7-9
Y	CN 211130921 U (ZHEJIANG YONGKANG SUYUAN INDUSTRY&TRADE CO., LTD.) 31 July 2020 (2020-07-31) description, paragraphs [0016]-[0042], and figures 1-9	7-9
A	CN 109984696 A (HEBEI JIESHIBAO DAILY-USE PLASTIC PRODUCTS CO., LTD.) 09 July 2019 (2019-07-09) entire document	1-10

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"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
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"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
"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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
07 September 2022	**26 September 2022**
Name and mailing address of the ISA/CN **China National Intellectual Property Administration (ISA/CN)** **No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088, China** Facsimile No. **(86-10)62019451**	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2022/102572

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 210008986 U (JIAXING JACKSON TRAVEL PRODUCTS CO., LTD.) 04 February 2020 (2020-02-04) entire document	1-10
A	CN 106821196 A (CHEN XUEQIN) 13 June 2017 (2017-06-13) entire document	1-10
A	US 2008006640 A1 (NATALE, Joseph A.) 10 January 2008 (2008-01-10) entire document	1-10

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2022/102572

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	215838885	U	18 February 2022	None			
CN	108451460	A	28 August 2018	CN	208988757	U	18 June 2019
				CN	209091235	U	12 July 2019
				CN	210169985	U	24 March 2020
				CN	211511687	U	18 September 2020
				EP	3510911	A1	17 July 2019
				US	2019216287	A1	18 July 2019
				US	11154178	B2	26 October 2021
CN	211130921	U	31 July 2020	None			
CN	109984696	A	09 July 2019	None			
CN	210008986	U	04 February 2020	None			
CN	106821196	A	13 June 2017	None			
US	2008006640	A1	10 January 2008	None			

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