Claims

1. A mop bucket for cleaning and squeezing a flat mop with a wiper and a mop head, comprising:

a bucket body (1) and a squeezing device (7) disposed inside the bucket body (1);

characterized in that, the bucket body (1) has a squeezing water section (5) and a cleaning section (6), which are respectively at two different positions when used;

when the mop head (4) of the flat mop is removably inserted into the squeezing device (7), the squeezing device (7) presses against the wiper on the mop head (4) and scrapes the wiper on the mop head (4).

2. The mop bucket according to claim 1, characterized in that, the squeezing device (7) comprises a frame (9) and a squeezer (11);

the frame (9) has a squeezing port (10) for receiving the mop head (4);

the squeezer (11) is disposed adjacent to the squeezing port (10), so that the squeezer (11) can press the wiper on the mop head (4) to scrape the wiper.

3. The mop bucket according to claim 2, characterized in that, the squeezer (11) is a squeezing strip, a squeezing sheet, or a rotatable squeezing water roller, and the squeezer (11) is fixed on the frame (9);

or, the squeezer (11) is a squeezing strip, a squeezing sheet, or a rotatable squeezing water roller, and the squeezer (11) is movably connected to the frame (9) via an elastic device;

or, the squeezer (11) is a squeezing strip, a squeezing sheet, or a rotatable squeezing water roller, the frame (9) has an inclined groove, and the squeezer (11) is movably positioned in the groove and can move along the inclined groove.

4. The mop bucket according to claim 1, characterized in that, at least one squeezing device (7) is disposed at the cleaning section (6), and at least one squeezing device (7) is disposed at the squeezing water section (5).

5. The mop bucket according to claim 1, characterized in that, there is only one squeezing device (7) which is disposed in either the squeezing water section (5) or the cleaning section (6) of the bucket body (1).

6. The mop bucket according any one of claims 1 to 5, characterized in that, an upward protruding portion (49) extending from the bucket body (1), which defines the squeezing water section (5), and the section of the bucket body (1) below the upward protruding portion (49) defines the cleaning section (6).

7. The mop bucket according any one of claims 1 to 5, characterized in that, the cleaning section (6) and the squeezing water section (5) are physically independent and separated with each other in the bucket body (1).

8. The mop bucket according to claim 5, characterized in that, a sliding track (1a) is disposed on a top of the bucket body (1), and the squeezing device (7) can slide on the sliding track (1a) and move between the squeezing water section (5) and the cleaning section (6).

9. The mop bucket according to claim 5, characterized in that, a turnover frame (57) with a head portion (57a) and a tail portion (57b) is disposed on the bucket body (1);

the head portion (57a) is hinged to a top of the bucket body (1);

the squeezing device (7) is rotatably disposed on the tail portion (57b) of the turnover frame (57);

the turnover frame (57) can be positioned and switched between a horizontal state and a vertical state relative to the top of the bucket body (1), so as to switch the squeezing device (7) between the squeezing water section (5) and the cleaning section (6).

10. The mop bucket according any one of claims 1 to 5, characterized in that, a buffer for the flat mop is disposed within the squeezing water section (5) and/or the cleaning section (6) of the bucket body (1).

11. The mop bucket according to claim 10, characterized in that, the buffer is an elastic cushion, an elastic block, or a spring-loaded device, which is disposed on a bottom of the bucket body (1);

the spring-loaded device comprises an ejected spring (17) with a bottom and a top and a rebound carrier (18); and

the bottom of the ejected spring (17) is fixed relative to the bucket body (1), while the top of the ejected spring (17) presses against the rebound carrier (18).

12. The mop bucket according to claim 10, wherein the buffer is an elastic cushion, an elastic block, or a spring-loaded device, which is disposed on the mop head (4);

the spring-loaded device comprises an ejected spring (17) with a bottom and a top and a rebound carrier (18); and

the bottom of the ejected spring (17) is fixed relative to the bucket body (1), while the top of the ejected spring (17) presses against the rebound carrier (18).

13. The mop bucket according to any one of claims 1 to 5, characterized in that, a plurality of drainage valves corresponding to the cleaning section (6) and/or the squeezing water section (5) are disposed on the bucket body (1).

14. The mop bucket according to claim 7, characterized in that, an enclosure frame (25) is disposed within the squeezing water section (5) of the bucket body (1).

15. The mop bucket according to claim 14, characterized in that, the enclosure frame (25) further comprises a upper end surface and a guide port (25a) inclined downward on the upper end surface.

16. The mop bucket according to claim 7, characterized in that, a water pumping device is disposed within the squeezing water section (5) of the bucket body (1), and the water pumping device pumps water out of the squeezing water section (5).

17. The mop bucket according to claim 16, characterized in that, the water pumping device comprises a water pumping cylinder (27) placed on the bottom of the bucket body (1);

a baffle (28) is disposed within the water pumping cylinder (27) to divide the interior of the water pumping cylinder into an upper water pumping section (29) connected to a water pumping pipe and a lower water supply section (30) in communication with the bucket body (1);

a piston (31) is disposed within the water pumping section (29) and sealed against the water pumping section (29), and an elastic device is disposed between the piston (31) and the baffle (28); and

a check valve is disposed on the baffle (28), which is closed when the piston is pressed down and opened when the piston is lifted up.

18. The mop bucket according to claim 16, characterized in that, the water pumping device comprises an impeller pump (35) disposed on the bottom of the bucket body (1), which is connected to the water pumping pipe, an impeller is disposed within the impeller pump (35), a driving shaft is disposed in a center of the impeller, and a driving gear (36) is disposed on the driving shaft;

a gear carrier (37) and a lifting rack (38) are disposed within the bucket body (1), and a duplex gear comprising a bevel gear (39) and a driven gear (40) engaged with the lifting rack (38) is disposed on the gear carrier (37); and

a vertical spindle (41) is disposed on the gear carrier (37), and an upper gear (42) engaged with the bevel gear (39) and a lower gear (43) engaged with the driving gear (36) are disposed on the spindle (41).

19. The mop bucket according to claim 7, characterized in that, the squeezing device (7) comprises a squeezing frame (44) disposed in the squeezing water section (5), a cleaning frame (45) disposed in the cleaning section (6) and two squeezers (11);

the squeezing frame (44) has a squeezing port (44a) for receiving the mop head (4), and the cleaning frame (45) has a cleaning port (45a) for receiving the mop head (4);

the two squeezers (11) are respectively disposed adjacent to the squeezing port (44a) of the squeezing frame (44) and the cleaning port (45a) of the cleaning frame (45);

so that each squeezer (11) can touch the wiper on the mop head (4) to scrape the wiper.

20. The mop bucket according to claim 19, characterized in that, the squeezing frame (44) has a water passage (46) extending toward the cleaning section (6), and the water from the wiper on the mop head (4) squeezed by the squeezer (11) in the squeezing water section (5) flows into the cleaning section (6) through the water passage (46).

21. The mop bucket according to claim 7, characterized in that, the bucket body (1) has a raised step (48) protruding upwardly from bottom of the squeezing water section (5).

22. The mop bucket according to claim 7, characterized in that, the squeezing device (7) is disposed in the squeezing water section (5), and a cleaner (14') is disposed in the cleaning section (6);

the cleaner (14') can move up and down relative to the bucket body (1), when the wiper on the mop head (4) moves relative to the cleaner (14'), the wiper on the mop head (4) is cleaned for being scrapped between the wiper on the mop head (4) and the cleaner (14').

23. The mop bucket according to claim 22, characterized in that, the movement of the cleaner (14') relative to the bucket body (1) is achieved by hand.

24. The mop bucket according to claim 23, characterized in that, the cleaner (14') is driven to move upward when the mop head (4) is pressed down, and the cleaner (14') is driven to move downward when the mop head (4) is pulled upward.

25. The mop bucket according to claim 24, characterized in that, the cleaner (14') comprises a first frame (21') and a second frame (22') which are separated from each other;

a cleaning component (20') is disposed on the first frame (21') or the second frame (22');

a third frame (23') is disposed between the first frame (21') and the second frame (22');

a first rod (24') is hinged at two ends of the first frame (21'), a second rod (25') is hinged at two ends of the second frame (22'), and a third rod (26') close to the first frame (21') and a fourth rod (27') close to the second frame (22') are hinged at two ends of the third frame (23');

the first rod (24') and the third rod (26') are hinged at their lower ends, and the second rod (25') and the fourth rod (27') are hinged at their lower ends; and,

during cleaning, a force is applied after the mop head (4) is aligned with the third frame (23'), so that the first frame (21') and the second frame (22') can move upward and downward.

26. The mop bucket according to claim 24, characterized in that, the cleaner (14') is connected to a gear-rack mechanism which is driven by the mop head (4).

27. The mop bucket according to claim 22, characterized in that,

the squeezing device comprises a squeezer (7') for squeezing the wiper on the mop head (4) and a first support opposite to the squeezer (7');

the squeezer (7') is directly or indirectly disposed on the bucket body (1), and the first support is directly disposed on the bucket body (1);

the space between the squeezer (7') and the first support is defined as a squeezing space; and,

when the mop head (4) is inserted into the squeezing space, the wiper on the mop head (4) can move vertically relatively to the squeezer (7') and be squeezed by the squeezer (7').

28. The mop bucket according to claim 27, characterized in that,

the first support is a pair of support ribs (9') longitudinally extending from an end surface of the bucket body (1);

or a pair of support ribs (9') transversely extending from a side surface of the bucket body (1);

or a pair of support frames (10') longitudinally extending from an end surface of the bucket body (1), with a roller (11') being disposed at a tail end of each of the support frames (10');

or a pair of support frames (10') transversely extending from a side surface of the bucket body (1), with a roller (11') being disposed on each of the support frames (10').

29. The mop bucket according to claim 22, characterized in that, a water flow device for transferring water from the squeezing water section (5) to the cleaning section (6) is disposed in the squeezing water section (5).

30. The mop bucket according to claim 29, characterized in that, the water flow device is a water flow passenger (13') communicating the squeezing water section (5) with the cleaning section (6), and the water flow passenger (13') is disposed over the squeezing water section (5) and the cleaning section (6).

31. The mop bucket according to claim 7, characterized in that, the squeezing device (7) is only disposed in the squeezing water section (5), the squeezing device (7) comprises a squeezer (7'') for squeezing the wiper on the mop head (4) and a first support opposite to the squeezer (7'');

the squeezer (7'') is directly or indirectly disposed on the bucket body (1), and the first support is disposed on the bucket body (1);

the space between the squeezer (7'') and the first support is defined as a squeezing space;

when the mop head (4) is inserted into the squeezing space, the wiper on the mop head (4) can move relatively to the squeezer (7'') and be squeezed by the squeezer (7'').

32. The mop bucket according to claim 31, characterized in that, a cleaning device for cleaning the wiper is disposed within the cleaning section (6).

33. The mop bucket according to claim 31, characterized in that,

the first support is a pair of support ribs (9'') longitudinally extending from an end surface of the bucket body (1);

or a pair of support ribs (9'') transversely extending from a side surface of the bucket body (1);

or a pair of support frames (10'') longitudinally extending from an end surface of the bucket body (1), with a roller (11'') being disposed at a tail end of each of the support frames (10'');

or a pair of support frames (10'') transversely extending from a side surface of the bucket body (1), with a roller (11'') being disposed on each of the support frames (10'').

34. The mop bucket according to claim 31, characterized in that, the squeezer (7'') is a squeezing roller, a squeezing sheet or a squeezing plate.

35. The mop bucket according to claim 31, characterized in that, the squeezing device comprises a frame (8'') disposed on the bucket body (1), and the squeezer (7'') is disposed on the frame (8'').

36. The mop bucket according to claim 31, characterized in that, a water flow device for transferring water from the squeezing water section (5) to the cleaning section (6) is disposed in the squeezing water section (5).

37. The mop bucket according to claim 36, characterized in that, the water flow device is a water flow passenger (13'') communicating the squeezing water section (5) with the cleaning section (6), and the water flow passenger (13'') is disposed over the squeezing water section (5) and the cleaning section (6).

38. The mop bucket according to claim 7, characterized in that, the squeezing device (7) is only disposed in the squeezing water section (5), and a cleaning device for cleaning the wiper is disposed within the cleaning section (6).

39. The mop bucket according to claim 38, characterized in that,

the cleaning device comprises a cleaner (14'') for squeezing and scraping the wiper on the mop head (4) and a second support opposite to the cleaner (14'');

the cleaner (14'') is directly or indirectly disposed on the bucket body (1), and the second support is disposed on the bucket body (1);

the space between the cleaner (14'') and the second support is defined as a cleaning space; and,

when the mop head (4) is inserted into the cleaning space, the wiper on the mop head (4) can move relatively to the cleaner (14'') and be squeezed by the cleaner (14'').

40. The mop bucket according to claim 39, characterized in that,

the second support is a pair of support ribs (9'') longitudinally extending from an end surface of the bucket body (1);

or a pair of support ribs (9'') transversely extending from a side surface of the bucket body (1);

or a pair of support frames (10'') longitudinally extending from an end surface of the bucket body (1), with a roller (11'') being disposed at a tail end of each of the support frames (10'');

or a pair of support frames (10'') transversely extending from a side surface of the bucket body (1), with a roller (11'') being disposed on each of the support frames (10'');

or a pair of support frames (10'') longitudinally extending from an end surface of the bucket body (1), with a pair of springs (16'') and a pair of elastic blocks (17'') being disposed in each of the support frames (10''), the springs (16'') acting on the elastic blocks (17'') to allow portions of the elastic blocks (17'') to rebound from the tail end of the support frames (10'').

41. The mop bucket according to claim 39, characterized in that, the cleaner (14'') is a cleaning scraper, a cleaning brush, cleaning teeth or soft cleaning rubber.

42. The mop bucket according to claim 38, wherein the cleaning device (7) is a cleaning scraper, a cleaning brush, cleaning teeth or soft cleaning rubber;

the cleaning device (7) is disposed on an attaching component, and the attaching component is directly disposed on the bucket body (1).

43. The mop bucket according to claim 39, characterized in that, the cleaning device further comprises a cleaning frame (15'') disposed on the bucket body (1), and the cleaner (14'') is disposed on the cleaning frame (15'').

44. A cleaning tool set using the mop bucket according to any one of claims 1 to 5, comprising the mop bucket and a flat mop (2);

characterized in that, the flat mop (2) comprises a mop rod (3), a mop head (4) rotatably attached to the mop rod (3), and a wiper disposed on the mop head (4);

the wiper is capable of touching the squeezing device on the mop bucket (1).