CLAIMS

What is claimed is:

1. A cleaning robot system comprising a base station (1) and a cleaning robot (2), wherein the cleaning robot (2) comprises a mop member (22111) that is configured to mop a floor, the base station (1) is arranged to be independent to the cleaning robot (2) of the cleaning robot system, and the base station (1) comprises a base station body (10) and a mop member cleaning device (11) arranged on the base station body (10), the mop member cleaning device (11) is configured to clean the mop member (22111), wherein the mop member cleaning device (11) comprises a protruding structure, the protruding structure comprises at least one protruding portion (112), the at least one protruding portion (112) is in contact with the mop member (22111) during the process of the mop member cleaning device (11) cleaning the mop member (22111), the mop member cleaning device (11) comprises a cleaning notch (111), the cleaning notch (111) is configured to place the mop member (22111) during the process of the mop member cleaning device (11) cleaning the mop member (22111), the mop member cleaning device (11) further comprises a fluid inlet structure (113), cleaning fluid for cleaning the mop member (22111) is allowed to enter the cleaning notch (111) through the fluid inlet structure (113) and be sprayed on the mop member (22111), and, the mop member cleaning device (11) further comprises a fluid discharge structure (114), the cleaning fluid after cleaning the mop member (22111) is allowed to be discharged outside of the cleaning notch (111) through the fluid discharge structure (114), dirty cleaning fluid after the cleaning is scraped off the mop members (22111) by the at least one protruding portion (112), and thrown away from the mop members (22111) under the action of a centrifugal force when the mop members (22111) are rotated, to flow to the fluid discharge structure (114).

2. The cleaning robot system of claim 1, wherein, the mop member cleaning device (11) comprises a cleaning roller (118), and the cleaning roller (118) is in contact with the mop member (22111) during the process of the mop member cleaning device (11) cleaning the mop member (22111).

3. The cleaning robot system of claim 1, wherein, the at least one protruding portion (112) is a curved protruding portion, a straight protruding portion, or a polyline protruding portion.

4. The cleaning robot system of claim 1, wherein, the protruding structure comprises at least two protruding portions (112), the at least two protruding portions (112) are defined in radial arrangement and/or in array arrangement.

5. The cleaning robot system of claim 1, wherein, the mop member cleaning device (11) and the mop member (22111) are arranged to be rotatable relative to each other, and/or, the mop member cleaning device (11) and the mop member (22111) are arranged to be movable relative to each other, during the process of the mop member cleaning device (11) cleaning the mop member (22111).

6. The cleaning robot system of claim 1, wherein, the base station (1) further comprises a scraping and blocking member (117), the scraping and blocking member (117) is configured to scrape rubbish off the mop member (22111) before the mop member (22111) gets in the mop member cleaning device (11), and/or, the scraping and blocking member (117) is configured to prevent cleaning fluid from splashing during the process of the mop member cleaning device (11) cleaning the mop member (22111).

7. The cleaning robot system of claim 1, wherein, the base station (1) further comprises a guiding structure defined on the mop member cleaning device (11), the guiding structure is configured to guide the cleaning robot (2) to move relative to the mop member cleaning device (11), to allow the mop member (22111) to get in and out the mop member cleaning device (11).

8. The cleaning robot system of claim 7, wherein, the guiding structure comprises a

guiding surface (116) that is inclined obliquely downward from the mop member cleaning device (11) and extends to the floor; and/or, the guiding structure comprises an upwardly projected guiding wheel (119); and/or, the guiding structure comprises a guiding plate (115) defined at a lateral side of the mop member cleaning device (11).

9. The cleaning robot system of claim 8, wherein, the guiding structure comprises the guiding surface (116) and/or the upwardly projected guiding wheel (119), the guiding wheel (119) is arranged on the guiding surface (116).

10. The cleaning robot system of claim 1, wherein, the base station (1) further comprises a mop drying device, the mop drying device is configured to dry the mop member (22111).

11. The cleaning robot system of claim 1, wherein, the base station (1) further comprises a charging device (14) arranged on the base station body (10), the charging device (14) is configured to charge the cleaning robot (2).

12. The cleaning robot system of claim 1, wherein, the base station (1) further comprises a cleaning fluid supply device (12) that is connected with the fluid inlet structure (113), the cleaning fluid supply device (12) is configured to supply the cleaning fluid for cleaning the mop member (22111) to the cleaning notch (111); and/or, the base station (1) further comprises a dirty fluid collection device (13) that is connected with the fluid discharge structure (114), the dirty fluid collection device (13) is configured to collect the cleaning fluid after the base station (1) cleaning the mop member (22111).

13. The cleaning robot system of claim 12, wherein, the cleaning fluid supply device (12) comprises a first storage unit (121) and a first power device, the first storage unit (121) is configured to store the cleaning fluid, the first power device is configured to drive the cleaning fluid to flow to the cleaning notch (111) from the first storage unit (121); and/or,

the dirty fluid collection device (13) comprises a second storage unit (131), the second storage unit (131) is configured to store the cleaning fluid after cleaning the mop member (22111).

14. The cleaning robot system of claim 13, wherein, the cleaning fluid supply device (12) further comprises an auxiliary material supply device, the auxiliary material supply device is configured to provide auxiliary material required for cleaning the mop member (22111) to the first storage unit (121) or the cleaning notch (111).

15. The cleaning robot system of claim 13, wherein, the second storage unit (131) is arranged below the cleaning notch (111) and connected with the cleaning notch (111); or, the dirty fluid collection device (13) further comprises a second power device, the second power device is configured to pump the cleaning fluid after cleaning the mop member (22111) into the second storage unit (131) for the purpose of storage.

16. The cleaning robot system of claim 13, wherein, the base station (1) further comprises a fluid level detection device, the fluid detection device is configured to detect a fluid level of the cleaning fluid.

17. The cleaning robot system of claim 16, wherein, the fluid level detection device comprises a first conductive element (151), a second conductive element (152) and a third conductive element (153), the first conductive element (151) is configured for detecting capacitance value of environment, the second conductive element (152) and the third conductive element (153) are both arranged in the first storage unit (121) and the second storage unit (131), the second conductive element (152) is configured for detecting capacitance difference caused by a fluid level change of the cleaning fluid, the third conductive element (153) is configured for detecting capacitance value of the cleaning fluid.

18. The cleaning robot system of claim 1, wherein, the cleaning robot (2) comprises a

moving device (21) that is configured to drive the cleaning robot (2) to move on floor, and a cleaning device (22) that is configured to clean the floor, the cleaning device (22) comprises a mop device (221), the mop device (221) comprises at least one mop unit (2211), the at least one mop unit (2211) comprises the mop member (22111).

19. The cleaning robot system of claim 18, wherein, the cleaning robot system further comprises a lifting mechanism (24), the lifting mechanism (24) is arranged on the cleaning robot (2) and/or the base station (1), the lifting mechanism (24) is configured to lift a forward end and/or a rearward end of the cleaning robot (2).

20. The cleaning robot system of claim 18 or claim 19, wherein, the moving device (21) comprises a moving wheel (211), the cleaning robot (2) further comprises a suspension device, the suspension device is arranged at the moving wheel (211) for elastically connecting the moving wheel (211) and the chassis (202) to keep the moving wheel (211) in contact with the floor.

21. The cleaning robot system according to claim 18 or claim 19, wherein, the mop device (221) further comprises a mop drive mechanism (2212), the cleaning robot (2) comprises a chassis (202), the mop drive mechanism (2212) is configured to drive the mop member (22111) of the at least one mop unit (2211) to rotate relative to the chassis (202), and/or, the mop drive mechanism (2212) is configured to drive the mop member (22111) of the at least one mop unit (2211) to horizontally reciprocate relative to the chassis (202).

22. The cleaning robot system of claim 21, wherein, an amount of the at least one mop unit (2211) is one, the mop drive mechanism (2212) is configured to drive the mop member (22111) of the mop unit (2211) to rotate and/or horizontally reciprocate relative to the chassis (202).

23. The cleaning robot system of claim 21, wherein, an amount of the at least one mop

unit (2211) is two, that is, two mop units (2211) are included, the mop drive mechanism (2212) is configured to drive the mop members (22111) of the two mop units (2211) to rotate around a vertical axis; wherein, the mop members (22111) of the two mopping units (2211) are rotatable in a same direction or in opposite directions around the vertical axis relative to the chassis (202), or, the mop members (22111) of the two mopping units (2211) are alternately rotatable in the same direction or in opposite directions around the vertical axis relative to the chassis (202).