CLAIMS

1. A humidification apparatus including:

an apparatus outlet port to enable delivery of gas to a patient;

a removable humidification chamber for containing water;

a humidification compartment that receives the humidification chamber;

a flow path for a gas stream to the apparatus outlet port; and

an actuator that can be operated by a user to move the humidification chamber from: an operating position in which the humidification chamber is received by the humidification compartment and in which the humidification chamber forms a portion of the flow path through the humidification apparatus; to a releasing position in which the humidification chamber is displaced outwardly from the operating position and in which the user can remove the humidification chamber from the apparatus,

wherein the apparatus has at least one first coupling device that acts between the humidification chamber and the humidification compartment, and is operable to releasably lock the humidification chamber in the operating position.

2. The apparatus according to claim 1, wherein the apparatus has a blower for generating the gas steam and the flow path extends from the blower to the outlet of the apparatus.

3. The apparatus according to claim 1 or 2, wherein the humidification chamber has a thermally conductive heater base, the humidification compartment has a heater element, and the actuator presses the heater element against the heater base when the humidification chamber is in the operating position.

4. The apparatus according to any one of the preceding claims, wherein the flow path is sealed and extends through the humidification chamber to the apparatus outlet port, or a gas stream conduit, when the humidification chamber is in the operative position, and the flow path is broken when in the releasing position.

5. The apparatus according to any one of the preceding claims, wherein the humidification compartment has a flow path outlet port, hereinafter referred to as the outlet port, that is in communication with a blower outlet of a blower that generates the stream of breathable gas, and the apparatus outlet port can be either a compartment outlet port or humidification chamber outlet port.

6. The apparatus according to claim 2, wherein the flow path has a first portion extending from the blower to the humidification chamber and the first portion of the flow path is sealed to the humidification chamber when in the operating position, and the seal is broken when in the releasing position.

7. The apparatus according to claim 2, wherein the flow path has a second portion extending to the apparatus outlet port, the second portion of the flow path is sealed to the humidification chamber when in the operating position, and the seal is broken when in the releasing position.

8. The apparatus according to any one of the preceding claims, wherein the actuator has an active force or resistance, and the user pushes the humidification chamber against the actuator in moving the humidification chamber from the releasing position to the operating position.

9. The apparatus according to any one of the preceding claims, wherein the humidification chamber moves a release distance between the operating position and the releasing position, in which the release distance is in the range of 1 to 20 cm, suitably in the range of 2 to 10 cm, and even more suitably in the range of 4 to 10 cm.

10. The apparatus according to any one of the preceding claims, whereby when the humidification chamber is in the operating position, the humidification chamber is located so as not to protrude from the humidification compartment.

11. The apparatus according to any one of the preceding claims, wherein the humidification chamber has a gripping section for manually removing the humidification chamber from the humidification compartment, the gripping section protrudes from the humidification compartment when the humidification chamber is in the releasing position.

12. The apparatus according to claim 11, wherein the gripping section is located within the humidification compartment when the humidification chamber is in the operating position.

13. The apparatus according to claim 11 or 12, wherein the gripping section includes a portion of an outer side wall of the chamber that extends outwardly of an opening of

the humidification compartment, and the gripping section has a higher friction to a user's hand relative to adjacent surfaces of the humidification chamber.

14. The apparatus according to any one of the preceding claims, wherein the apparatus includes a sealing assembly that seals the flow path, extending between the humidification compartment and the humidification chamber when the humidification chamber is in the operating position.

15. The apparatus according to any one of the preceding claims, wherein the sealing assembly provides a seal between an opening of the humidification compartment and the humidification chamber when the humidification chamber is in the operating position.

16. The apparatus according to claim 14, wherein the sealing assembly includes a chamber sealing member extending about an upper part of outer wall of the humidification chamber.

17. The apparatus according to claim 14, wherein the chamber sealing member sealingly engages an inner wall of the humidification compartment when the humidification chamber is in the operating position.

18. The apparatus according to any one of claims 14 to 17, wherein the sealing assembly includes a compartment sealing member extending about an upper part of a side wall defining an opening of the humidification compartment.

19. The apparatus according to claim 16, wherein the compartment sealing member sealingly engages the humidification chamber when the humidification chamber is in the operating position.

20. The apparatus according to claim 17 when appended to claim 14, wherein the chamber sealing member and the compartment sealing member sealingly engage when the humidification chamber is in the operating position.

21. The apparatus according to any one of the preceding claims when appended to claim 13, wherein the actuator is operable by a user to control movement of the base to move the humidification chamber between the operating position to the releasing position.

22. The apparatus according to any one of the preceding claims, wherein the first pressing force moves the humidification chamber from the releasing position to the operating position and activates the first coupling device to releasably lock the humidification chamber in the operating position

23. The apparatus according to any one of the preceding claims, wherein the actuator can be operated by the user to move the humidification chamber from the operating position to the releasing position by applying a second pressing force to the humidification chamber which moves the humidification chamber inwardly of the operating position, and then removing the second pressing force, and once the second pressing force has been removed, the actuator is operable to move the humidification chamber from the operating position to the releasing position.

24. The apparatus according to any one of the preceding claims. wherein the humidification chamber has a thermally conductive heater base, the humidification compartment has a heater element, and that the actuator applies an active force to the humidification chamber whilst the first coupling device secures the humidification chamber in the operating position against the active force, thereby pressing the heater element against the heater base.