CLAIMS

1. An oxygen concentrator provided with an adsorption bed filled with an adsorbent selectively adsorbing nitrogen relative to oxygen and a compressed air supply device supplying compressed air to the adsorption bed, adsorbing and eliminating nitrogen in raw material air to produce unadsorbed oxygen and supplying an oxygen gas at a predetermined flow rate by a flow rate setting device, comprising:

an oxygen concentration sensor detecting a concentration of an oxygen gas produced,

a flow rate sensor measuring an oxygen gas flow rate,

the oxygen concentrator performing a control increasing/decreasing a supply airflow volume of the compressed air supply device based on a detected oxygen concentration value to maintain an oxygen concentration at a predetermined concentration, and

a flow rate dependent control device configured to perform~~ing~~ a control that does not allow~~without allowing~~ the supply airflow volume of the compressed air supply device to change when the value detected by the flow rate sensor ~~being~~is outside ~~the~~a predetermined range.

2. The oxygen concentrator according to claim 1, wherein a threshold of a value detected by the flow rate sensor is allocated individually in accordance with a set value of the flow rate setting device or independently of a set flow rate value.

3. The oxygen concentrator according to claim 2, wherein ~~a~~the flow rate dependent control device is configured to perform ~~a device performing~~ a control ~~without allowing~~ that does not allow the supply airflow volume of the compressed air supply device to change regardless of a value detected by the oxygen concentration sensor when the value detected by the flow rate sensor is

+10 % or higher or -10 % or less of a set value of the flow rate setting device.

4. The oxygen concentrator according to any of claims 1 to 3, wherein the flow rate sensor is an ultrasonic-type flow rate sensor or a heat wire-type flow rate sensor.

5. An oxygen concentrator provided with an adsorption bed filled with an adsorbent selectively adsorbing nitrogen relative to oxygen and a compressed air supply device supplying compressed air to the adsorption bed, adsorbing and eliminating nitrogen in raw material air to produce unadsorbed oxygen and supplying an oxygen gas at a predetermined flow rate by a flow rate setting device, comprising:

an oxygen concentration sensor detecting a concentration of an oxygen gas produced by the oxygen concentrator,

a temperature sensor measuring an environmental temperature,

a flow rate sensor measuring an oxygen gas flow rate,

the oxygen concentrator performing a control increasing/decreasing a supply airflow volume of the compressed air supply device based on a detected oxygen concentration value to maintain an oxygen concentration at a predetermined concentration,

a ~~temperature-dependent~~ control device configured to perform a control that does not allow the supply airflow volume of the compressed air supply device to decrease when the temperature sensor detects a value lower than a predetermined lower temperature limit of the threshold during running of the oxygen concentrator~~performing a control of a supply airflow volume of the compressed air supply device based on a value detected by the temperature sensor when the value detected by the temperature sensor being outside a predetermined threshold~~, and

~~a~~the control device is further configured to perform~~ing~~ a flow rate dependent control that does not allow ~~without allowing~~ the supply airflow volume of the compressed air supply device to change when the value detected by the flow rate sensor ~~being~~is outside a predetermined range.

6. The oxygen concentrator according to claim 5, wherein the control device is ~~a control device performing~~configured to perform a control ~~without allowing~~that does not allow the supply airflow volume of the

compressed air supply device to decrease when the temperature sensor detects~~ing~~ a value lower than a predetermined lower temperature limit of the threshold and the supply airflow volume ~~being~~is lower than a predetermined airflow volume during running of the oxygen concentrator.

7. The oxygen concentrator according to claim 5 or 6, wherein the control device is configured to ~~a device~~ perform~~ing~~ a control that makes a supply airflow volume of the compressed air supply device to be higher than a supply airflow volume corresponding to an oxygen concentration value detected by the oxygen concentration sensor, regardless of the value detected by the oxygen concentration sensor when the temperature sensor detects a value lower than a predetermined lower temperature limit of the threshold on start-up of the oxygen concentrator.

8. The oxygen concentrator according to any of claims 1 to 7, wherein the oxygen concentration sensor is a zirconia-type oxygen concentration sensor or an ultrasonic-type oxygen concentration sensor.