

TITLE

PARTITION SYSTEM

TECHNICAL FIELD

[0001] The present disclosure relates to partition systems controlling air flow.

BACKGROUND

[0002] Japanese Unexamined Patent Publication No. 2021-12012 describes a personal air conditioning system. The personal air conditioning system is installed in a task space, which is a working space for workers. The task space is defined by four partition walls. A slit-shaped outlet is formed at a lower end of one partition wall, and temperature-controlled and humidity-controlled air is blown out from this outlet into the task space.

[0003] The personal air conditioning system is provided with a baffle plate installed vertically above the outlet of the partition wall. The baffle plate is configured to be capable of swinging upward about a rotating shaft extending in the horizontal direction. That is, the angle of the baffle plate with respect to the horizontal plane is configured to be variable. The air blown out from the outlet hits the baffle plate and becomes the air flow of which wind direction is adjusted by the baffle plate.

[0004] The worker performs working in a position facing the baffle plate. An operation instruction unit, which is a remote controller operating the baffle plate, is fixed to the partition wall on the opposite side of the partition wall on which the baffle plate is provided as viewed from the worker. The worker can adjust the angle of the baffle plate by operating

the operation instruction unit to change the direction of the air flow.

[0005] The personal air conditioning system is provided with a personal computer installed with software controlling the angle of the baffle plate. This software stores a relationship between the blowing position and the angle of the baffle plate as a plurality of modes, and the worker can select a desired mode from the plurality of modes. By selecting the mode, the worker can adjust the angle of the baffle plate to blow the air flow to the desired position.

[0006] There is a problem in that, since the baffle plate of the personal air conditioning system described above is fixed to the partition wall, it is difficult to cope with change of the layout of the furniture in the room. In addition, in the personal air conditioning system, the outlet needs to be formed at the lower end of the partition wall, and the baffle plate needs to be installed on the partition wall. Therefore, since the device is large-scale, there is a concern that the installation cannot be easily performed and the cost is high.

SUMMARY

[0007] An object of the present disclosure is to provide a partition system capable of forming air flow at any temperature in a room and simplifying a device.

[0008] A partition system according to the present disclosure is (1) the partition system controlling an air flow in a room. The partition system includes a partition operating in the room, a control unit controlling the operation of the partition, and an air flow temperature distribution storage unit storing an air flow temperature distribution capable of being selected by a user of the partition system. The control unit operates the partition

by transmitting a drive signal to the partition so that the air flow temperature distribution in the room becomes the air flow temperature distribution stored in the air flow temperature distribution storage unit. The partition system is installed in a building. The air flow temperature distribution storage unit stores in advance the relation data between the position of the partition and the distribution of the air flow of the space in a room the building has.

[0009] In this partition system, the air flow and the temperature in the room are controlled by the operation of the partitions. Therefore, since the air flow and the temperature can be controlled by operating the partitions as a room divider, even if the layout of the furniture in the room is changed, the controlling can be easily dealt with. In this partition system, it is not necessary to newly form the outlet, and it is sufficient to install the partition in the room, so that the installation of the device can be simplified. As a result, the installation can be easily performed, and the increase in cost can be suppressed. The partition system includes the air flow temperature distribution storage unit storing user-selectable air flow temperature distributions and the control unit. The control unit transmits the drive signal to the partition to operate the partition so that the air flow temperature distribution in the room becomes the air flow temperature distribution stored in the air flow temperature distribution storage unit. Therefore, by driving the partition, the air flow temperature distribution in the room can be set to user-selectable air flow temperature distribution. As a result, since the air flow temperature distribution in the room can be set to the user-selectable air flow temperature distribution, any air flow in the room can be formed by

operating the partition.

[0010] (2) In (1) above, the air flow temperature distribution storage unit may be a database acquiring in advance a relationship between an operating state of the partition and the air flow temperature distribution.

5 In this case, since the user-selectable air flow temperature distribution is stored in advance in the database, the user can form any air flow temperature distribution in the room by selecting the air flow temperature distribution.

10 [0011] (3) In (1) or (2) above, the interior of the room is divided into a plurality of areas, and the plurality of areas may include a first area and a second area different from the first area. The control unit may operate the partition by transmitting the drive signal to the partition so that the air flow to the first area is stronger than the air flow to the second area. In this case, by operating the partition, the first area with strong air flow and
15 the second area with weak air flow can be formed. Therefore, the air flow for each of the plurality of areas in the room can be appropriately controlled. As a result, for example, the infection risk of viruses or the like can be reduced by strengthening the air flow in the first area where many people are concentrated.

20 [0012] (4) In any one of (1) to (3) above, the partition may have a base portion and a rotating portion rotating with respect to the base portion. The control unit may rotate the rotating portion and control a rotation angle of the rotating portion with respect to the base portion by transmitting the drive signal to the partition. In this case, the air flow in
25 the room can be controlled by controlling the rotation angle of the rotating portion of the partition. Therefore, it is possible to simplify the

configuration of the partition and arbitrarily control the air flow in the room.

[0013] (5) In any one of (1) to (4) above, the partition may have a base portion and a traveling body connected to the base portion and traveling on a floor surface in the room. The control unit may allow the traveling body to travel by transmitting the drive signal to the partition. In this case, since the partition receives the drive signal to allow the traveling body to travel, the partition can move the partition easily.

[0014] (6) In any one of (1) to (5) above, the partition system may further include an air flow generation device generating the air flow in the room. The control unit may control the air flow from the air flow generation device by transmitting the control signal to the air flow generation device. In this case, the control unit controls the operation of the partition by transmitting the drive signal to the partition and controls the air flow from the air flow generation device by transmitting the control signal to the air flow generation device. Therefore, since the partition and the air flow generation device can be interlocked, the air flow can be controlled more finely.

[0015] According to the present disclosure, it is possible to form air flow at any temperature in a room and to simplify a device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 is a diagram schematically illustrating a configuration of a partition system according to a first embodiment.

FIG. 2 is a block diagram illustrating functions of the partition system according to the first embodiment.

FIG. 3 is a flow chart illustrating an example of steps of an air

flow control method by the partition system.

FIG. 4 is a diagram schematically illustrating a configuration of a partition system according to a second embodiment.

5 FIGS. 5(a) and 5(b) are diagrams schematically illustrating air flow control by a partition system according to a third embodiment.

FIGS. 6(a) and 6(b) are diagrams schematically illustrating air flow control by a partition system according to Modified Example.

DETAILED DESCRIPTION

10 [0017] Embodiments of the partition system according to the present disclosure will be described below with reference to the drawings. In the description of the drawings, the same or corresponding elements are denoted by the same reference numerals, and overlapping descriptions are omitted as appropriate. In addition, the drawings may be partially simplified or exaggerated for easy understanding, and the dimensional
15 ratios and the like are not limited to those described in the drawings.

[0018] (First Embodiment)

As illustrated in FIG. 1, a partition system 1 according to this embodiment is installed, for example, in a building S. The partition system 1 includes an automatically movable partition 10 capable of
20 deflecting the flow of the air flow F in order to form any spatial temperature (air temperature) and the distribution of the air flow F.

[0019] The building S is, for example, a newly constructed building, and the partition system 1 is introduced when the building S is constructed. However, the building S may be an existing building, and the partition
25 system 1 may be introduced into the existing building S. The building S has a room H, the room H is defined by a ceiling 2 and a wall 3.

[0020] The partition system 1 controls the air flow F in the room H (in the interior of the room), so that the risk of virus infection of the person M, for example, staying in the space K of the room H is reduced. As an example, space K is an office space where the person M sitting in a chair C works at a desk B. However, the space K may not be an office space, but may be, for example, an event site. In this manner, the usage of the space K can be changed as appropriate.

[0021] The partition system 1 includes, for example, the partition 10 operating in the room and the air flow generation device 20. The air flow generation device 20 is, for example, an air conditioner for cooling. However, the air flow generation device 20 may be a ceiling fan. The air flow generation device 20 may be any device generating the air flow F, and the type of the air flow generation device 20 is not limited. The air flow F is, for example, a downward flow. However, the air flow F may be an upward flow, and the direction of the air flow F is not particularly limited.

[0022] For example, the interior of the room H is partitioned into a plurality of areas A through the partitions 10. The plurality of areas A include, for example, a first area A1 and a second area A2 different from the first area A1. The first area A1 and the second area A2 are aligned, for example, along a first direction D1, and the partition 10 is provided between the first area A1 and the second area A2. As an example, the first direction D1 is the horizontal direction.

[0023] For example, the partition 10 is an air flow control partition having both the function as a room divider and the function of controlling the air flow F. As an example, the partition 10 has the base portion 11

and the rotating portion 12 rotating with respect to the base portion 11. The base portion 11 has a pedestal portion 11b placed on the floor surface Y and a plate-like portion 11c extending vertically upward from the pedestal portion 11b. The plate-like portion 11c extends, for example,
5 in a second direction D2 intersecting (perpendicularly as the example) the first direction D1, and in a vertical direction D3.

[0024] The rotating portion 12 has, for example, a plate-like portion 12b moving in the first direction D1 with respect to the base portion 11 and a hinge portion 12c rotatably connecting the plate-like portion 12b to the
10 base portion 11. The hinge portion 12c is a shaft portion extending along the second direction D2. The plate-like portion 12b extends upward (or diagonally upward) from the hinge portion 12c in the second direction D2 and is rotatable with respect to the hinge portion 12c. The air flow F is controlled by changing the angle θ (rotational angle) of the
15 plate-like portion 12b with respect to the base portion 11.

[0025] FIG. 2 is a block diagram illustrating a functional configuration of the partition system 1 according to this embodiment. As illustrated in FIGS. 1 and 2, the partition system 1 controls the air flow F in the room by operating the partitions 10. For example, the partition system 1
20 operates the partition 10 so as to adjust the angle θ of the rotating portion 12 (plate-like portion 12b) with respect to the base portion 11. The partition system 1 may be a program such as an application executed on, for example, an information terminal T. The partition system 1 may be executed on a server that can communicate with, for example, the
25 information terminal T.

[0026] The information terminal T is, for example, a mobile terminal.

The mobile terminal indicates a portable information terminal such as a mobile phone including a smart phone, a tablet, a laptop computer, or a remote controller. The information terminal T may be a terminal other than the mobile terminal, and may be, for example, a personal computer (PC).

[0027] The information terminal T includes, as an example, a processor (for example, CPU) executing the operating system and software (application), a main storage unit configured with a ROM and a RAM, an auxiliary storage unit configured with a flash memory or the like, a communication control unit configured with a wireless communication module or the like, an input device, and an output device such as a display. However, a configuration of the information terminal T is not limited to the above and can be changed as appropriate.

[0028] Each functional element of the information terminal T is implemented by reading predetermined software into the processor or storage unit (for example, the main storage unit or the auxiliary storage unit described above) and executing the software. The processor operates the communication control unit, the input device, or the output device described above according to the software, and reads and writes data in the storage unit. Data or databases used for processing of the information terminal T are stored in the storage unit.

[0029] The partition system 1 includes, for example, a controller 30. The controller 30 controls the operation of the partition 10 to adjust the air flow F. In addition, the controller 30 may control the air flow F from the air flow generation device 20. As an example, the controller 30 can communicate with the partition 10, the air flow generation device 20, and

the information terminal T. The controller 30 may be an application program installed in the information terminal T. In this manner, the arrangement location and the arrangement mode of the controller 30 are not particularly limited.

5 [0030] For example, the controller 30 includes a control unit 31 controlling the operation of the partition 10 and an air flow temperature distribution storage unit 32 storing the air flow temperature distributions capable of being selected by the user (for example, the person M) of the partition 10. The air flow temperature distribution indicates at least one
10 of the distribution of the air flow F and the distribution of temperature of the space K. The control unit 31 controls the operation of the partition 10 by transmitting a drive signal G1 to the partition 10.

[0031] As a specific example, the control unit 31 rotates the rotating portion 12 and controls the angle θ of the rotating portion 12 with respect
15 to the base portion 11 by transmitting the drive signal G1 to the partition 10. For example, the control unit 31 controls the air flow F from the air flow generation device 20 by transmitting a control signal G2 to the air flow generation device 20.

[0032] The air flow temperature distribution storage unit 32 is, for
20 example, the database storing in advance relation data indicating a relationship between the operating state of the partition 10 and the air flow temperature distribution. In this case, the air flow temperature distribution storage unit 32 stores in advance the position of the partition 10 (for example, the angle θ) and the distribution of the air flow F in the
25 space K. The air flow temperature distribution storage unit 32 may be the air flow temperature distribution database storing in advance the

relation data between the position of the partition 10, the distribution of the air flow F in the space K, and the distribution of the temperature in the space K.

[0033] The air flow temperature distribution storage unit 32 may store in advance the relation data between the state of the air flow F from the air flow generation device 20, the position of the partition 10, the distribution of the air flow F in the space K, and the distribution of the temperature in the space K. The state of the air flow F from the air flow generation device 20 is, for example, at least one of the blowing temperature, the air volume, and the blowing angle of the air flow F from the air flow generation device 20.

[0034] For example, the work of storing the relation data between the position of the partition 10 and the distribution of the air flow F in the space K in the air flow temperature distribution storage unit 32 is performed before the operation of the partition system 1. In this work, as an example, the relation data between the blowing temperature, the air volume, and the blowing angle of the air flow F from the air flow generation device 20, the position of the partition 10, and the air flow temperature distribution in the space K are linked, and the linked relation data are stored in the air flow temperature distribution storage unit 32. The above relation data may be derived by the air flow simulation, may be derived by actual measurement, or may be derived from the predetermined relation data formula.

[0035] The plurality of related data are stored in the air flow temperature distribution storage unit 32, and the information terminal T can select the plurality of air flow temperature distributions stored in the air flow

temperature distribution storage unit 32. For example, at the information terminal T, the user (hereafter also simply referred to as "user") of the partition system 1 selects the air flow temperature distribution stored in the air flow temperature distribution storage unit 32.

5 At this time, the control unit 31 operates the partition 10 so that the air flow temperature distribution in the room becomes the air flow temperature distribution stored in the air flow temperature distribution storage unit 32 by transmitting the drive signal G1 to the partition 10.

[0036] For example, the air flow temperature distribution storage unit 32
10 stores the air flow temperature distribution in which the air flow to the first area A1 is stronger than the air flow F to the second area A2. When the user of the partition system 1 selects this air flow temperature distribution, the control unit 31 operates the partition 10 by transmitting the drive signal G1 to the partition 10 so that the air flow to the first area
15 A1 becomes stronger than the air flow to the second area A2. As a specific example, the partition 10 is operated so that the rotating portion 12 is inclined toward the second area A2 with respect to the base portion 11. Accordingly, the state in which the air flow F to the first area A1 is stronger than the air flow F to the second area A2 is realized.

20 [0037] Next, the example of the steps of the air flow control method according to this embodiment will be described with reference to the flowchart of FIG. 3. First, the relation data between the air flow temperature distribution in the room and the position of the partition 10 is stored in the air flow temperature distribution storage unit 32 (step S1).
25 Next, the user selects the air flow temperature distribution stored in the air flow temperature distribution storage unit 32 (step S2).

[0038] The user selects the air flow temperature distribution from, for example, the information terminal T. As a specific example, the information terminal T displays the plurality of air flow temperature distributions stored in the air flow temperature distribution storage unit 32 as air flow temperature patterns in the room. The air flow temperature pattern in the room includes, for example, the pattern in which the air flow to the specific area in the room is strengthened to lower the temperature of the area, and the pattern in which the air flow and temperature in the room are allowed to be uniform. In this case, the user can select one air flow temperature pattern in the room from the plurality of air flow temperature patterns in the room with respect to the information terminal T.

[0039] When the user selects the air flow temperature distribution, the control unit 31 determines the position of the partition 10 based on the selected air flow temperature distribution (air flow temperature pattern in the room) (step S3). Then, the control unit 31 transmits the drive signal G1 indicating the determined position of the partition 10 to the partition 10. When the partition 10 receives the drive signal G1 indicating the position of the partition 10 from the control unit 31, the partition 10 operates to control the air flow F so as to be the position of the partition 10 (step S4). The series of steps is then completed.

[0040] Next, the functions and effects obtained from the partition system 1 and the air flow control method according to this embodiment will be described. In the partition system 1 and the air flow control method according to this embodiment, the air flow F and the temperature in the room are controlled by operating the partition 10. Therefore, since the

air flow F and temperature can be controlled by operating the partition 10 as a room divider, it is easy to cope with even the case where the layout of furniture in the room is changed.

[0041] In the partition system 1, there is no need to newly form an outlet, and the partition 10 may be installed as the room divider in the room, so that the device can be simplified. As a result, installation can be easily performed, and the increase in cost can be suppressed. The partition system 1 includes the air flow temperature distribution storage unit 32 storing the air flow temperature distribution selectable by the user and the control unit 31. The control unit 31 transmits the drive signal G1 to the partition 10 to operate the partition 10 so that the air flow temperature distribution in the room becomes the air flow temperature distribution stored in the air flow temperature distribution storage unit 32. Therefore, by driving the partition 10, the air flow temperature distribution in the room can be set to the air flow temperature distribution selected by the user. As a result, since the air flow temperature distribution in the room can be set to the air flow temperature distribution selected by the user, any air flow F can be formed in the room by operating the partition 10.

[0042] In this embodiment, the air flow temperature distribution storage unit 32 is the database acquiring in advance the relationship between the operating state of the partition 10 and the air flow temperature distribution. Therefore, since the air flow temperature distribution selectable by the user is stored in advance in the database, the user can form any air flow temperature distribution in the room by selecting the air flow temperature distribution.

[0043] In this embodiment, the interior of the room is divided into the

plurality of areas A, and the plurality of areas A include the first area A1 and the second area A2 different from the first area A1. By transmitting the drive signal to the partition 10, the control unit 31 operates the partition 10 so that the air flow F to the first area A1 is stronger than the air flow F to the second area A2. Therefore, by operating the partition 10, the first area A1 with the strong air flow F and the second area A2 with the weak air flow F can be formed. Therefore, the air flow F can be appropriately controlled for each of the plurality of areas A in the room. As a result, for example, by strengthening the air flow F in the first area A1 where many persons are densely packed, the risk of infection with viruses or the like can be reduced.

[0044] In this embodiment, the partition 10 has the base portion 11 and the rotating portion 12 rotating with respect to the base portion 11. The control unit 31 rotates the rotating portion 12 and controls the angle θ of the rotating portion 12 with respect to the base portion 11 by transmitting the drive signal G1 to the partition 10. Therefore, the air flow F in the room can be controlled by controlling the angle θ of the rotating portion 12 of the partition 10. Therefore, it is possible to simplify the configuration of the partition 10 and to arbitrarily control the air flow F in the room.

[0045] In this embodiment, the partition system 1 includes an air flow generation device 20 generating the air flow F in the room. The control unit 31 controls the air flow F from the air flow generation device 20 by transmitting the control signal G2 to the air flow generation device 20. Therefore, the control unit 31 controls the operation of the partition 10, by transmitting the drive signal G1 to the partition 10 and controls the air

flow F from the air flow generation device 20 by transmitting the control signal G2 to the air flow generation device 20. Therefore, since the partition 10 and the air flow generation device 20 can be interlocked, the air flow F can be controlled more finely.

5 [0046] (Second Embodiment)

Next, the partition system 41 according to a second embodiment will be described with reference to FIG. 4. A portion of the configuration of the partition system 41 is the same as the portion of the configuration of the partition system 1 described above. Therefore, in
10 the following description, descriptions that overlap with the description of the partition system 1 are denoted by the same reference numerals and appropriately omitted.

[0047] The partition system 41 includes the partition 50 different from the partition 10 described above. The partition 50 has a base portion 51
15 and a traveling body 52 connected to the base portion 51 and traveling on the floor surface Y in the room. The base portion 51 has, for example, a plate-like portion 51b extending upward (vertically upward or obliquely upward) from the traveling body 52.

[0048] The traveling body 52 has, for example, a vehicle body 52b and a
20 plurality of wheels 52c attached to a lower portion of the vehicle body 52b. Each of the plurality of wheels 52c supports the vehicle body 52b, and the base portion 51 extends upward from the vehicle body 52b. The air flow F is controlled by rolling the wheels 52c on the floor surface Y and moving the partition 50 along the floor surface Y. As a specific
25 example, the control unit 31 controls the air flow F by transmitting the drive signal G1 to the partition 50 to move the traveling body 52 to

change the position of the partition 50 in the room.

[0049] As described above, in the partition system 41 according to the second embodiment, the partition 50 has the base portion 51 and the traveling body 52 connected to the base portion 51 and traveling on the floor surface Y in the room. The control unit 31 allows the traveling body 52 to travel by transmitting the drive signal G1 to the partition 50. Therefore, since the partition 50 can allow the traveling body 52 to travel by receiving the drive signal G1, the movement of the partition 50 can be easily performed. For example, the control unit 31 can allow a lot of the air flow F to enter the second area A2 than the first area A1 by moving the partition 50 located below the downward air flow F to the position closer to the first area A1.

[0050] (Third Embodiment)

Next, a partition system 61 according to a third embodiment will be described with reference to FIGS. 5(a) and 5(b). FIGS. 5(a) and 5(b) are diagrams schematically illustrating operating states of a plurality of partitions 70 in the partition system 61. The partition 70 has a base portion 71, a rotating portion 72 rotating with respect to the base portion 71, and a traveling body 73 connected to the base portion 71 and traveling on the floor surface Y.

[0051] For example, the configuration of the base portion 71 is the same as the configuration of the base portion 11 (or the base portion 51) described above, the configuration of the rotating portion 72 is the same as the configuration of the rotating portion 12 described above, and the configuration of the traveling body 73 is the same as the configuration of the traveling body 52 described above. That is, the partition 70 has both

the function of rotating the rotating portion 12 of the partition 10 and the function of the traveling body 52 of the partition 50.

[0052] For example, the plurality of areas A include a first area A1, a second area A2, a third area A3, and a fourth area A4, and the first area A1, the second area A2, the third area A3, and the fourth area A4 are aligned in this order along the first direction D1. The plurality of air flow generation devices 80 are provided in the room. For example, the air flow generation device 80 has the outlet 81 of the air conditioner provided on the ceiling 2.

[0053] The plurality of (three as the example) outlets 81 are aligned along the first direction D1. The plurality of outlets 81 include, for example, a first outlet 81b, a second outlet 81c, and a third outlet 81d, and the first outlet 81b, the second outlet 81c, and the third outlet 81d are aligned in this order. As an example, the area on the one end side in the first direction D1 (the left side in FIGS. 5(a) and 5(b)) from a first outlet 81b is the first area A1, and the area between the first outlet 81b and the second outlet 81c is the second area A2. The area between the second outlet 81c and the third outlet 81d is the third area A3, and the area located on the other end side (the right side in FIGS. 5(a) and 5(b)) in the first direction D1 other than the second outlet 81c is the fourth area A4.

[0054] When the user of the partition system 61 selects the air flow temperature distribution in the same manner as described above, the control unit 31 controls the operations of the plurality of partitions 70 by transmitting the drive signal G1 to each of the plurality of partitions 70.

For example, as illustrated in FIG. 5(a), the control unit 31 controls the operation of the partitions 70 so that the temperature in the room becomes

uniform. More specifically, the control unit 31 moves the plurality of partitions 70 to the ends in the room in the first direction D1 so that the partitions 70 are not positioned directly below the outlet 81, and thus, the temperature in the room becomes uniform.

5 [0055] For example, as illustrated in FIG. 5(b), the control unit 31 controls the operation of the partition 70 so that the temperature of the first area A1 is lower than the temperature of the second area A2. Then, the control unit 31 controls the operation of the partition 70 so that the temperature of the third area A3 is lower than the temperature of the
10 fourth area A4.

[0056] More specifically, the control unit 31 moves one partition 70 directly below the first outlet 81b and rotates the rotating portion 72 of the partition 70 so as to be inclined toward the second area A2. As a result, the air flow F to the first area A1 is allowed to be stronger than the
15 air flow F to the second area A2, and thus, the temperature of the first area A1 is allowed to be lower than the temperature of the second area A2.

[0057] Then, the control unit 31 moves one partition 70 from the second outlet 81c to the position closer to the first outlet 81b, and moves the partition 70 different from the partition 70 directly below the third outlet
20 81d. Then, the rotating portion 72 of the partition 70 moved to directly below the third outlet 81d is rotated so as to be inclined toward the fourth area A4. As a result, the air flow F to the third area A3 is allowed to be stronger than the air flow F to the fourth area A4, so that the temperature of the third area A3 is lower than that of the fourth area A4.

25 [0058] As described above, in the partition system 61 according to the third embodiment, since the position of the partition 70 can be controlled

so that the air flow temperature in a portion of the room is different from the air flow temperature in other portion, any air flow F in the room can be formed. Therefore, the same functions and effects of the partition system 61 as those of the partition system 1 and the like described above can be obtained.

[0059] Various embodiments of the partition system according to the present disclosure have been described above. However, the present disclosure is not limited to the above-described embodiments, and can be modified as appropriate within the scope of the claims. That is, the function, configuration, shape, size, number, material, and arrangement of each unit of the partition system according to the present disclosure can be changed as appropriate within the scope of the above spirit.

[0060] For example, in FIGS. 5(a) and 5(b), the example in which the plurality of partitions 70 control the air flows F from the plurality of air flow generation devices 80 has been described. However, the air flow F may be controlled by using a plurality of types of partitions, and the type of air flow generation device is not limited to the air flow generation device 80.

[0061] FIGS. 6(a) and 6(b) are partition systems 91 according to Modified Example of FIGS. 5(a) and 5(b). The partition system 91 controls the air flow F from the air flow generation device 92 by operating the partition 10 having the rotating portion 12 and the partition 50 having the traveling body 52. The air flow generation device 92 is a ceiling fan. The air flow generation device 92 includes, for example, a first ceiling fan 92b, a second ceiling fan 92c, and a third ceiling fan 92d.

[0062] For example, the partitions 10 are arranged directly below the first

ceiling fan 92b and directly below the third ceiling fan 92d, respectively, and thus, the partition 50 can be moved between the pair of partitions 10 aligned along the first direction D1. When the user of the partition system 91 selects the air flow temperature distribution, the control unit 31 controls the operations of the partitions 10 and 50 by transmitting the drive signals G1 to the partitions 10 and 50, respectively.

[0063] For example, as illustrated in FIG. 6(a), the control unit 31 controls the partitions 10 and 50 so that the air flow F in the room becomes uniform. More specifically, the control unit 31 controls the partitions 10 so that the rotating portion 12 of each partition 10 extends vertically upward from the base portion 11, and allows the traveling body 52 of the partition 50 to travel so as to be positioned directly below the second ceiling fan 92c. Accordingly, the uniform air flow F can be formed in each of the first area A1, the second area A2, the third area A3, and the fourth area A4.

[0064] In addition, as illustrated in FIG. 6(b), the control unit 31 controls the partitions 10 and 50 so that the air flow F to the first area A1 is stronger than the air flow F to the second area A2 and so that the air flow F to the third area A3 is stronger than the air flow F to the fourth area A4. More specifically, the control unit 31 rotates the rotating portion 12 of the partition 10 positioned directly below the first ceiling fan 92b toward the second area A2 and rotates the rotating portion 12 of the partition 10 positioned directly below the third ceiling fan 92d toward the fourth area A4.

[0065] Then, the control unit 31 moves the traveling body 52 of the partition 50 from directly below the second ceiling fan 92c to the position

closer to the second area A2. As a result, a state in which more air flow F enters the first area A1 than the second area A2 and more air flow F enters the third area A3 than the fourth area A4, is implemented. Therefore, the same functions and effects as each of the above-described
5 embodiments can be obtained from the partition system 91.

[0066] In the above-described embodiment, the control unit 31 transmitting the drive signal G1 to the partition 10 and transmitting the control signal G2 to the air flow generation device 20 has been described. However, in the partition system according to the present disclosure, the
10 control unit may not transmit the control signal to the air flow generation device. That is, the partition system may be operated independently from the air flow generation device. In this case, the control unit may control the operation of the partition, and thus, the controlling of the air flow generation device can be allowed to be unnecessary.

[0067] In the above-described embodiment, the air flow temperature distribution storage unit 32, which is the database acquiring in advance the relationship (relation data) between the operating state of the partition
15 10 and the air flow temperature distribution, has been described. However, the air flow temperature distribution storage unit may not be the database. For example, the air flow temperature distribution storage unit may be an environment sensor. For example, the air flow temperature distribution storage unit may have a number-of-persons detection sensor and store the air flow temperature distribution according to the number of persons detected by the number-of-persons detection
20 sensor. In this case, the control unit can transmit the stronger air flow to the area where there are many the number of persons detected by the
25

number-of-persons detection sensor, and thus, the risk of infection by viruses or the like can be reduced.

[0068] For example, the air flow temperature distribution storage unit may have the conversation volume sensor for each area. Then, the control unit may transmit the more air flow to the area with the large conversation volume than the area with the small conversation volume detected by the conversation volume sensor. In this case, since more air flow can be transmitted to areas with the large conversation volume, the risk of infection by viruses or the like can be reduced. For example, the air flow temperature distribution storage unit may have at least one of the temperature sensor and the air flow sensor. In this case, the control unit can perform feedback control so that the temperature and air flow in the room become appropriate according to at least one of the detected temperature and air flow.

[0069] In the above-described embodiment, the partition system 1 including the air flow generation device 20, which is the air conditioner for cooling, has been described. However, the air flow generation device is not limited to cooling, and may be used for heating. That is, the partition system according to the present disclosure can be applied not only to cooling but also to heating.

REFERENCE SIGNS LIST

[0070] 1: partition system, 2: ceiling, 3: wall, 10: partition, 11: base portion, 11b: pedestal portion, 11c: plate-like portion, 12: rotating portion, 12b: plate-like portion, 12c: hinge portion, 20: air flow generation device, 30: controller, 31: control unit, 32: air flow temperature distribution storage unit, 41: partition system, 50: partition, 51: base portion, 51b:

plate-like portion, 52: traveling body, 52b: vehicle body, 52c: wheel, 61: partition system, 70: partition, 71: base portion, 72: rotating portion, 73: traveling body, 80: air flow generation device, 81: outlet, 81b: first outlet, 81c: second outlet, 81d: third outlet, 91: partition system, 92: air flow generation device, A: area, A1: first area, A2: second area, A3: third area, A4: fourth area, B: desk, C: chair, D1: first direction, D2: second direction, D3: vertical direction, F: air flow, G1: drive signal, G2: control signal, H: room, K: space, M: person, S: building, T: information terminal, Y: floor surface, θ : angle.

WHAT IS CLAIMED IS:

1. A partition system controlling an air flow in a room, comprising:
a partition operating in the room;
a control unit controlling the operation of the partition; and

5 an air flow temperature distribution storage unit storing an air flow temperature distribution capable of being selected by a user of the partition system,

wherein the control unit operates the partition by transmitting a drive signal to the partition so that the air flow temperature distribution
10 in the room becomes the air flow temperature distribution stored in the air flow temperature distribution storage unit,

wherein the partition system is installed in a building,

wherein the air flow temperature distribution storage unit stores in advance the relation data between the position of the partition and the
15 distribution of the air flow of the space in a room the building has.

2. The partition system according to claim 1,

wherein the air flow temperature distribution storage unit is a database storing in advance a relationship between an operating state of
20 the partition and the air flow temperature distribution.

3. The partition system according to claim 1 or 2,

wherein the interior of the room is divided into a plurality of areas,
wherein the plurality of areas include a first area and a second

25 area different from the first area, and

wherein the control unit operates the partition by transmitting the

drive signal to the partition so that the air flow to the first area is stronger than the air flow to the second area.

4. The partition system according to any one of claims 1 to 3,
5 wherein the partition has a base portion and a rotating portion rotating with respect to the base portion, and
wherein the control unit rotates the rotating portion and controls a rotation angle of the rotating portion with respect to the base portion by transmitting the drive signal to the partition.

10 5. The partition system according to any one of claims 1 to 4,
wherein the partition has a base portion and a traveling body connected to the base portion and traveling on a floor surface in the room, and
15 wherein the control unit allows the traveling body to travel by transmitting the drive signal to the partition.

20 6. The partition system according to any one of claims 1 to 5 further comprising an air flow generation device generating the air flow in the room,
wherein the control unit controls the air flow from the air flow generation device by transmitting the control signal to the air flow generation device.