Decision on Opposition

Opposition No. 2019-700671

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The case of opposition to the granted patent regarding inventions of Patent No. 6473902, titled "Coating system and coating method", has resulted in the following decision:

Conclusion

Patent No. 6473902 regarding Claims 1 to 14 is maintained.

Reason

No. 1 History of the procedures

The application of Patent No. 647390 (hereinafter, referred to as the "Patent") regarding Claims 1 to 14 is an application originally filed on August 18, 2015 as an International Patent Application. The registration and establishment of the patent right (the number of claims: 14) thereof was made on February 8, 2019, and a gazette containing the patent was issued on February 27 of the same year. The opposition to the granted patent regarding Claims 1 to 14 was filed on August 27, 2019 by Akira KUMON (hereinafter, referred to as the "Patent Opponent").

No. 2 Inventions of the Patent

The inventions according to Claims 1 to 14 of the Patent (hereinafter, referred to "Patent Invention 1", etc.) are specified by the matters respectively recited in Claims 1 to 14 of the Scope of Claims attached to the application of the Patent. They are as follows.

"[Claim 1] A coating system comprising: a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction; and

a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle.

[Claim 2]

The coating system according to Claim 1, wherein the coating robot is included in at least a pair of coating robots, the pair of coating robots comprising:

first axes disposed on a common line parallel to the conveyance direction; and

first arms turnable about the first axes respectively and extendable in directions in which the first arms move away from each other.

[Claim 3]

The coating system according to Claim 2, wherein the pair of coating robots comprise symmetric arm configurations that are symmetric to each other with respect to a surface that is disposed at an intermediate position between the pair of coating robots and that is perpendicular to the common line.

[Claim 4]

The coating system according to Claim 3, further comprising an additional pair of coating robots,

wherein the pair of coating robots and the additional pair of coating robots constitute

a first pair of coating robots disposed to one side of a conveyor configured to convey the vehicle in the conveyance direction, and

a second pair of coating robots disposed to another side of the conveyor opposite to the one side of the conveyor such that the second pair of coating robots are symmetric to the first pair of coating robots with respect to the conveyor, and

wherein two coating robots, among the first pair of coating robots and the second pair of coating robots, that are diagonally opposite to each other across the conveyor have identical arm configurations.

[Claim 5]

The coating system according to any one of Claims 1-4, further comprising:

a pair of guides symmetric to each other with respect to a conveyor configured to convey the vehicle in the conveyance direction; and

traveling stages movable along the pair of guides to support the movable operation robot,

wherein the movable operation robot comprises a first pair of movable operation robots disposed to one guide of the pair of guides, and a second pair of movable operation robots disposed to another guide of the pair of guides, and

wherein the first pair of movable operation robots and the second pair of movable operation robots are configured to operate different openable members of the plurality of openable members in sides of the vehicle.

[Claim 6]

The coating system according to Claim 5, wherein the traveling stages comprise

a first pair of traveling stages disposed on the one guide of the pair of guides, each traveling stage of the first pair of traveling stages being configured to travel independently with one movable operation robot of the first pair of movable operation robots being supported by the each traveling stage, and

a second pair of traveling stages disposed on the another guide of the pair of guides, each traveling stage of the second pair of traveling stages being configured to travel independently with one movable operation robot of the second pair of movable operation robots being supported by each of the traveling stages.

[Claim 7]

The coating system according to Claim 5, further comprising fixed operation robots fixed in the coating booth with the coating robot disposed between the fixed operation robots in the conveyance direction,

wherein the openable member comprises

a front openable member disposed at a front portion of the vehicle, one fixed operation robot of the fixed operation robots being configured to operate the front openable member, and

a rear openable member disposed at a rear portion of the vehicle, another fixed opener robot of the fixed operation robots being configured to operate the rear openable member.

[Claim 8]

The coating system according to Claim 7,

wherein the coating robot is configured to coat a side exposed portion of the vehicle exposed through one side openable member, among the plurality of side openable members, that is opened by one movable operation robot of the first pair of movable operation robots and the second pair of movable operation robots, and

wherein the coating robot is configured to coat a front exposed portion or a rear exposed portion of the vehicle exposed through the front openable member or the rear openable member opened by the one fixed operation robot or the other fixed operation robot.

[Claim 9]

The coating system according to Claim 7, wherein the fixed operation robots are fixed to the coating booth at positions lower than the coating robot in the height direction.

[Claim 10]

The coating system according to Claim 7, wherein the fixed operation robots are fixed to the coating booth with a movable range of the operation robot in the conveyance direction being disposed between the fixed operation robots.

[Claim 11]

A coating method comprising,

by using

a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction,

a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle, and

a robot control device to perform operation control of the coating robot and the movable operation robot:

making, by the robot control device, the movable operation robot open the openable member;

making, by the robot control device, the movable operation robot holding the openable member in an opened state move in a manner to follow up the vehicle; and

making, by the robot control device, the coating robot coat a portion opened by opening the openable member.

[Claim 12]

The coating method according to Claim 11,

wherein the movable operation robot is a robot

configured to operate a side openable member that is the openable member in a side of the vehicle,

wherein the coating method comprises,

by further using a fixed operation robot that is fixed in the coating booth, and is configured to operate a front openable member and a rear openable member that are the openable member in a front or rear side of the vehicle,

making, by the robot control device, the fixed operation robot open the front openable member and the rear openable member,

making, by the robot control device, an arm of the fixed operation robot holding the front openable member or the rear openable member in an opened state follow up the vehicle, and

making, by the robot control device, the coating robot coat portions opened by opening the front openable member and the rear openable member. [Claim 13]

The coating method according to Claim 12, wherein a period of time for which the movable operation robot keeps the side openable member open overlaps a period of time for which the fixed operation robot keeps at least one of the front openable member and the rear openable member open.

[Claim 14]

The coating method according to Claim 12 or 13, wherein the coating robot alone is used to coat an exposed portion exposed through the side openable member that is open and to coat an exposed portion of the vehicle exposed through the front openable member or the rear openable member that is open."

No. 3 Outline of the opposition grounds described in the written opposition

An outline of the opposition grounds described in the written opposition submitted by Patent Opponent on August 27, 2019 (hereinafter, referred to as "Written Opposition") is as follows.

1 The ground of opposition 1 (novelty according to Evidence A No. 1 and Evidence A No. 2 to Evidence A No. 4 as auxiliary evidences)

The inventions according to Claims 1 to 14 of the Patent are inventions made available for public use over telecommunications lines within Japan or in a foreign country prior to the filing of the application of the Patent, and fall under Article 29(1)(iii) of the Patent Act. Therefore, the applicant should not be granted a patent for the inventions. The patent according to Claims 1 to 14 falls under Article 113(2) of the Act and thus it should be revoked.

2 The ground of opposition 2 (inventive step according to Evidence A No. 1 as a primary cited document, Evidence A No. 2 to No. 4 as auxiliary evidences, and Evidence A No. 5 as a secondary cited document)

The inventions according to Claims 1 to 14 of the Patent are ones that could have been easily invented by a person ordinarily skilled in the art in the technical field to which the Invention belongs (hereinafter, referred to as "a person skilled in the art") before the application was filed on the basis of the following inventions described in the publications or made available for public use over telecommunications lines within Japan or in a foreign country prior to the filing of the application of the Patent. Thus, the applicant should not be granted a patent for the inventions in accordance with the provisions of Article 29(2) of the Patent Act. Therefore, the patent according to Claims 1 to 14 of the Patent falls under Article 113(2) of the Act and it should be revoked.

3 The ground of opposition 3 (inventive step according to Evidence A No. 6 as a primary cited document and Evidence A No. 5 as a secondary cited document)

The inventions according to Claims 1 to 14 of the Patent are ones that could have been easily invented by a person skilled in the art before the application was filed on the basis of the following inventions described in the publications distributed in Japan or a foreign country prior to the application of the Patent. The applicant should not be granted a patent for the inventions in accordance with the provisions of Article 29(2) of the Patent Act. Therefore, the patent according to Claims 1 to 14 of the Patent falls under Article 113(2) of the Act and it should be revoked.

4 Means of proof

Evidence A No. 1: A DVD that is supposed to store a movie titled "ABB Interlaced Concept for Car Body Painting" and made public by ABB Ltd. (Asea Brown Boveri Ltd.) in Switzerland on June 20, 2013.

Evidence A No. 2: A copy of Internet website (Automotive Manufacturing Solutions) made public on June 20, 2013 providing a description about the movie of Evidence A No. 1 and the hyperlink destination (https://www.automotivemanufacturingsolutions.com/abb-interlaced-concept-for-carbody-painting/31637.article)

Evidence A No. 3: A publication material, entitled "ABB Interlaced Painting Process", in "SURCAR 2013" by ABB Ltd., Switzerland, published on June 10, 2013 (Heisei 25)

Evidence A No. 4: International conference "SURCAR 2013", lecture program, June 10, 2013 (Heisei 25)

Evidence A No. 5: Japanese Unexamined Patent Application Publication No.

2014-61589

Evidence A No. 6: International Publication No. WO 2008/108401 Hereinafter, Evidence A No. 1 to No. 6 are referred to as "A-1", etc.

No. 4 Judgment by the body

1 Matters described in A-1 to A-6

(1) Matters disclosed in A-1 and inventions disclosed in A-1

A Matters disclosed in A-1

A-1 is a DVD in which a movie is recorded, and in the portion between 23'49" and 24'07", there is shown the following disclosure of situations.

 \cdot A situation of "coating system" in which, in a "coating booth", a coating robot is coating a vehicle.

 \cdot A situation in which a "coating robot" "having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth" is installed in the upper right and upper left portions of the above-mentioned movie.

 \cdot A situation in which the above-mentioned "coating robot" is coating a transported vehicle.

 \cdot A situation in which the doors of the vehicle are open by some sort of device (hereinafter, referred to as "a device to operate an openable member of a vehicle").

In this connection, Patent Opponent alleges that it can be confirmed that, in the lower right and the lower left of the movie between 23'49" and 24'07" of A-1, "operation robots" to operate doors ("openable members") of the vehicle of the coating target are installed, each of the "operation robots" is installed in such a way that its base is disposed at a position lower than the base of the above-mentioned "coating robot", and is a "mobile" "operation robot" "being movable along the conveyance direction" of the vehicle that moves together with the vehicle being transported (Written Opposition, page 9, lines 21 to 29). However, from the movie A-1, although it can be confirmed that doors of the vehicle of the coating target were opened by some sort of device, the kind of the device cannot be confirmed, and it cannot be confirmed whether the device is a "mobile" device "being movable along the conveyance direction" of the vehicle that moves together with the vehicle transported allegation whether the device is a "mobile" device "being movable along the conveyance direction" of the vehicle that moves together with the vehicle transported allegation whether the device is a "mobile" device "being movable along the conveyance direction" of the vehicle that moves together with the vehicle transported, and the above-mentioned allegation

cannot be adopted.

B The invention disclosed in A-1

It is obvious for a person skilled in the art that the "coating system" disclosed in A-1 has a "coating robot" and a control device to control "a device to operate an openable member of a vehicle", and it is also obvious for a person skilled in the art that there is provided a step in which the control device makes "a device to operate an openable member of a vehicle" open the openable member, and a step in which the control device makes the coating robot coat a portion opened by opening the openable member.

When the matters disclosed in A-1 are organized on the basis of the abovementioned matters, it is recognized that, in A-1, there are disclosed the following inventions (hereinafter, referred to as "A-1 system invention" and "A-1 method invention" in turn).

<A-1 system invention>

"A coating system comprising:

a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction, and

a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle."

<A-1 method invention>

"A coating method comprising,

by using

a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction,

a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle, and

a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle:

making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by

opening the openable member."

(2) Matters described in A-2

A-2 is a web page in which there is described "20 June 2013" in the upper left, and "View webinar" in the middle stage.

(3) Matters described in A-3

A-3 is a presentation material, in which there is described in the middle stage of the first page "SURCAR 2013 Didier Rouaud ABB Interlaced Painting Progress", and, on page 34, there is posted a picture of a system that is similar to the coating system viewed between 23'49" and 24'07" of A-1.

(4) Matters described in A-4

A-4 is a lecture program of an international conference "SURCAR 2013" carried out on June 10 and 11, 2013 (Heisei 25), and there is described, in the center of the first page, "26TH INTERNATIONAL CONGRESS ON AUTOMOTIVE BODY FINISHING", there is also described a lecture program of June 10, 2013 (Heisei 25) on the third page, and, in the right column, lines 13 to 15 of the same page, it is described as "3.00PM New Robotic Concept for Car Body Painting Didier ROUAUD, Manager Paint & Sealer Process Engineering, ABB".

(5) Matters described in A-5

In A-5, there are roughly described the following matters relating to "ROBOTIC PAINTING APPARATUS".

• "[Problem to be solved by the invention] [0009]

However, there still is a desire to reduce the size of the paint booth even further by eliminating the need for a linear rail system to parallelly translate the robots to a desired position and orientation.

[Means for solving the problem]

[0010]

Concordant and consistent with the present invention, a redundant robot in a robotic painting system that substantially reduces the size of the paint booth has surprisingly been discovered. According to the present invention, a redundant axis paint robot enables booth size reduction by increasing the usable envelope of the robot.

The redundant axis is used to avoid obstacles, the car body, and the opener robots during operation of the painting robots."

· "[0017]

FIG. 1 is an elevation view of a seven-axis paint robot 20 according to the invention. The seven-axis paint robot 20 includes a redundant axis of rotation that enables booth size reduction by increasing the usable envelope of the robot without use of a rail system. The redundant axis allows the seven-axis paint robot 20 to avoid obstacles in a paint booth, such as a workpiece and panel opener devices when the seven-axis paint robot 20 is actuated to desired positions and orientations. Similarly, the redundant axis allows the use of the five-axis door and hood-deck openers without a rail.

[0018]

The seven-axis paint robot 20 is a seven-axis articulated robot arm mounted on a modular base 21 that is adaptable to various mounting positions, such as wallmounting, or overhead mounting, for instance. In FIG. 1, the modular base 21 is oriented for attachment to a vertical surface (not shown) such as a paint booth wall or a vertical post or column used in a paint booth. The mounting configuration of the seven-axis paint robot 20 shown in FIG. 1 is considered to be an invert mounting configuration, because the seven-axis paint robot 20 extends downwardly from the modular base 21.

[0019]

As shown in FIG. 1, the seven-axis paint robot 20 is rotatably coupled to the modular base 21 for rotation of the seven-axis paint robot 20 about a first axis of rotation A1, also referred to as a 'waist' axis of rotation. The first axis of rotation A1 is shown to be a vertically aligned axis of rotation, allowing the robot arm 20 to rotate in a horizontally aligned plane in a first direction of rotation R1. A second axis of rotation A2, also referred to as a 'shoulder' axis of rotation, is perpendicular with, intersects, and extends traverse to the first axis of rotation A1, permitting rotational movement of the robot arm 20 along a vertical plane in a second direction of rotation R2, as shown in FIG. 1. It should be understood that different mounting configurations will result in the first and second axes of rotation A1, A2 having spatial orientations different from those shown in FIG. 1."

· "[0037]

FIG. 9 is a perspective view of a paint robot system 10 according to the

invention for use in the paint booth 40 shown in FIG. 8B. A plurality of vertical columns 28 (eight columns are shown) are connected at upper ends thereof by horizontal beams to form a robot supporting structure. As shown in FIG. 9, the paint robot system 10 includes four of the vertically oriented columns 28 on each longitudinal side of the paint booth 40 adjacent a path of travel of the vehicle 31 as it passes through the paint booth 40. The columns 28 aligned on each longitudinal side of the paint booth 40 are generally arranged along a straight line parallel to the path of movement of the vehicle body 31. Each of four columns 28 on each longitudinal side of the paint booth 40 is connected to at least one adjacent column 28 in a longitudinal direction of the paint booth 40 by one of the horizontal beams 29. Each column 28 on one longitudinal side of the paint booth 40 has an opposed column 28 or an opposed column 28 on a second longitudinal side of the paint booth 40 to form four pairs of the columns 28, and each pair of the columns 28 is interconnected by one of the horizontal beams 29. The columns 28 have a height such that the horizontal beams 29 connecting the upper ends of the columns 28 are arranged to be above an upper plane of the vehicle body 31 as it passes down the path formed between the longitudinal rows of the columns 28. It should be understood that the vertical columns 28 and the horizontal beams 29 may be tubular with hollow interiors in order to route wiring or supply lines to the robots 6, 20, 50, 60 without interfering with the remainder of the paint robot system 10.

[0038]

A first section of the paint booth 40 formed at an entrance (left end) of the paint booth 40 includes a first pair of the columns 28. Two six-axis exterior paint robots 6 are each mounted on an associated one of the columns 28 located in the first section for painting the first exterior coat to be applied to the vehicle body 31. A third section of the paint booth 40 formed at an exit (right end) of the paint booth 40 includes a second pair of the columns 28. Two more of the six-axis exterior paint robots 6 are mounted on associated ones of the columns 28 located in the third section for painting the first exterior coat. The seven-axis paint robots 20 can be used for the exterior painting in the first and third sections of the paint booth 40 in place of the six-axis paint robots 6 are mounted to the columns 28 such that a waist axis of rotation of each of the six-axis paint robots 6 is oriented horizontally parallel to the longitudinal axis of the booth 40. [0039]

A second section of the paint booth 40 is formed in a central portion of the paint booth 40 between the entrance and the exit thereof. The second section of the

paint booth includes four of the columns 28, forming the second pair of the columns 28. In the second section of the paint booth 40, each of the four columns 28 has mounted thereon one of the seven-axis interior paint robots 20, and a five-axis door opener robot 50. The five-axis door opener robots 50 are mounted to the columns 28 below the invert mounted seven-axis paint robots 20 so as to prevent interference between the seven-axis paint robot 20 and the five-axis door opener robot 50. Furthermore, as shown in FIG. 9, the use of the three vertically oriented axes of rotation connecting the links 52, 53, 54 of the door opener robot 50 allows for each of the door opener robots 50 to be retracted toward each of the associated columns 28 when not in use, to further prevent interference between the seven-axis paint robots 20 and the five-axis door opener robots 50. One of the columns 28 at the right end of the central portion of the system 10 and one of the columns 28 at the left end of the central portion each have a five-axis hood-deck opener robot arm 60 mounted thereon. The system 10 eliminates the rails 36 used in the prior art paint booth 30 shown in FIG. 8A, since all of the robots 6, 20, 50, 60 are mounted on the columns 28 such that each robot 6, 20, 50, 60 is mounted to a stationary base, thereby reducing the length of the paint booth 40. [0040]

FIG. 10 is a perspective view of a two-arm common base robot including the seven-axis paint robot 20 and the five-axis hood-deck opener robot 60 according to the invention. The robot arms 2 and 60 are rotatably mounted on a common base 12 at opposite ends of the common base 12, causing the robots 20, 60 to share a common 'waist' axis of rotation, which is indicated as the first axis of rotation A1 as shown in FIG. 10. In this configuration, the seven-axis paint robot 20 is invert mounted to a vertically oriented surface such as a wall or the vertical column 28 while the five axis hood-deck opener robot 60 is mounted in an upright position. It should be understood, however, that any combination of the six-axis paint robot 6, the seven-axis paint robot 20, the five-axis door opener robot 50, and the five-axis hood-deck opener robot 60 may be rotatably coupled to the opposing ends of the common base 12, including two of the same type of robot 6, 20, 50, 60 coupled to each end of the common base 12, as desired. Furthermore, it should be understood that the common base 12 may be mounted in any orientation, including a horizontal mounting orientation causing any of the robots 6, 20, 50, 60 sharing the common base 12 to share a horizontal 'waist' axis of rotation. In addition, additional robots arms and/or opening devices could be added to the vertical mounting structure. The common base 12 for two robot arms has the advantages of a shared purge for two paint robot arms 6, 20, a compact envelope, and reduced manufacturing cost.

[0041]

As shown in FIG. 9, each of the hood-deck opener robots 60 is upright mounted on one end of one of the common bases 12 while one of the seven-axis paint robots 20 is invert mounted to a second end of the one of the common bases 12. The common bases 12 are then mounted to one of the columns 28 disposed in the central portion of the paint booth 40. The hood-deck opener robots 60 are mounted to the common base 12 such that each hood-deck opener robot 60 may rotate along a horizontal plane below the vertical beams 29 connecting each pair of the columns 28 disposed on opposite longitudinal sides of the paint booth 40. When the hood-deck opener robot 60 is mounted above the seven-axis paint robot 20 on the common base 12 as shown in FIGS. 9 and 10, the placement of the hood-deck opener robot 60 is optimized to avoid interfering with the seven-axis paint robot arm 20. Also, this placement is optimal for the hood-deck opener robot 60 to share a common work envelope with the seven-axis paint robot 20. Additionally, the redundant axis formed within the hood-deck opener robot 60 may aid the hood-deck opener robot 60 in retracting toward an associated one of the columns 28 when the hood-deck opener robot 60 is not in use, further avoiding interference with the other robots 6, 20, 50 used in the paint booth 40."

• "[FIG. 1]







" (Note by the body: The figure is turned right by 90 degrees)

· "[FIG. 9]



" (Note by the body: The figure is turned right by 90 degrees)

(6) Matters described in A-6 and A-6 invention

A Matters described in A-6

In A-6, there are roughly described the following matters relating to a "painting system".

\cdot "Background Art

[0002] Among existing painting systems, a type of painting system having a painting

robot and a door opening/closing robot disposed on two travel guide rails provided at different heights on a side wall of a paint booth has been proposed (see, for example, Patent Document 1 and Patent Document 2).

Referring to Fig. 9, a first example of existing painting systems is described. An automotive body 7 is placed on a conveyer 8 and moved to a paint booth 2. Travel guide rails 3 are attached to side walls of the paint booth 2. Door opening/closing robots 11 and painting robots 12 are attached to the travel guide rails 3 so as to paint the automotive body 7. The door opening/closing robots 11 and the painting robots 12 are attached to the travel guide rails 3 disposed at different heights in the vertical direction so that the door opening/closing robots 11 and painting robots 12 can pass each other without interfering with each other. In this example of the existing art, the painting robots 12 are disposed on the travel guide rails 3 in an upper level, and the door opening/closing robots 11 are disposed on the travel guide rails 3 in a lower level.

[0003] Referring to Fig. 10, a second example of existing painting systems is described. An automotive body 102 is placed on a conveyer 100 and moved to a paint booth. Travel guide rails 120 are attached to a side wall of the paint booth. Door opening/closing robots (4, 11) and a painting robot 12 are attached to the travel guide rails so as to paint the automotive body 7. The door opening/closing robots (4, 11) and the painting robot 12 are attached to the travel guide rails 8 provided at different heights in the vertical direction so that the door opening/closing robots (4, 11) and the painting robot 12 can pass each other without interfering with each other. In this example, the painting robot 12 is disposed on a travel guide rail 3 in an upper level, and the door opening/closing robots (4, 11) are disposed on the travel guide rail 3 in a lower level.

Patent Document 1: WO2001/68267

Patent Document 2: WO2005/46880"

\cdot "Problems to be Solved by the Invention

[0004] For a painting system, reduction of the size of a paint booth and reduction of the number of robots have been desired. While painting is being performed, the paint booth is usually air conditioned such that air flows downward. A large paint booth requires a high flow rate, which causes a problem of high operating costs for air-conditioning equipment. Therefore, there has been a trend toward reducing the size of the paint booth so as to reduce the operating costs for the air-conditioning equipment.

In order to reduce the size of the paint booth, either the number of robots has to be reduced or the robots have to be disposed with high density. In order to paint an automotive body, two door opening/closing robots and a painting robot are necessary, as disclosed in the example of the existing painting systems. The robots are disposed in upper and lower levels, so that the robots are disposed with high density.

However, existing painting systems have the following problems. First, with a structure in which a painting robot is disposed on a travel guide rail in an upper level and a door opening/closing robot is disposed on a travel guide rail in a lower level, paint ejected from the painting robot is sprayed onto an automotive body and, in addition, as air flows downward in the paint booth, paint that is not sprayed onto the automotive body may adhere to the door opening/closing robot in the lower level. In such a case, a problem occurs in that a wrong color may adhere to a door when an opening/closing section of the door opening/closing robot contacts the door. In order to prevent the adherence of a wrong color, daily maintenance is necessary, which causes a problem of serviceability. Moreover, during a continuous painting process, it is necessary to check whether a smear is spreading on the opening/closing section of the door opening/closing robot and perform maintenance so as to remove the smear. A downtime required for the maintenance may interrupt a continuous painting process of several hundred vehicle bodies, which causes a problem of lowered productivity.

Second, an example of existing painting systems is described to have a structure in which one painting robot and two door opening/closing robots are disposed on a wall on one side of a paint booth. In order to paint the inside of a door, a trunk, and a front body with one painting robot, the painting robot should have a longest degree of extension that enables painting of the trunk and the front body, which requires a considerably long arm length. On the other hand, in order to paint the door, the painting robot may have to retract an arm to such an extent that it is outside the range of motion. Consequently, a large distance between the automotive body and the wall of the paint booth is required. Thus, the paint booth has to be large and air-conditioning equipment thereof has to have a high flow rate, which causes a problem in that a desired painting system cannot be provided. Even if the arm can be moved so that the arm can paint the door, performing painting with one robot requires a long time, which causes a problem in that productivity is reduced. In this case, the existing painting system supposedly employs an additional painting robot so as to effectively perform painting operations. However, this contradicts an original object of reducing the number of robots, which causes a problem in that a desired painting system is not provided.

The present invention, which has been achieved so as to address these problems, has an object to provide a painting system that optimizes the number and the disposition of robots in a paint booth and thereby improves productivity. Means for Solving the Problems [0005] To solve the problem, the present invention has the following structure.

The invention of Claim 1 provides a painting system for painting an article such as an automotive body, the painting system including a paint booth that is sealed, a conveyer for transporting the article through the paint booth, a first travel guide rail disposed on a side of the conveyer and extending along the conveyer, a second travel guide rail disposed on a side of the conveyer and extending along the conveyer at a height different from a height at which the first travel guide rail extends, a painting robot that is mounted on the first travel guide rail and moves along the first travel guide rail, and an opener robot that is mounted on the second travel guide rail and moves along the second travel guide rail, the painting robot and the opener robot being able to pass each other on the first travel guide rail and the second travel guide rail without interfering with each other, wherein the first travel guide rail is disposed at a position lower than that of the second travel guide rail, the painting robot is disposed on the first travel guide rail."

[図9]

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B Inventions described in A-6

It is obvious for a person skilled in the art that a painting system described in [0002], [0003], FIG. 9, and FIG. 10 of A-6 has a robot control device, and it is also obvious for a person skilled in the art that the robot control device has a step of making a door opening/closing robot open a door, a step of making, by the robot control device, the door opening/closing robot holding the door in an opened state move in a manner to follow up the automotive body, and a step of making, by the robot control device, the painting robot paint a portion opened by opening the door.

When the matters described in A-6 are organized on the basis of the matters mentioned above, it is recognized that, in A-6, there are described the following inventions (hereinafter, referred to as the "A-6 system invention" and the "A-6 method invention" in turn).

<A-6 system invention>

"A painting system for performing painting operations of an automotive body,

the painting system comprising:

a painting robot wherein an automotive body is placed on a conveyor to be moved to a paint booth, and two travel guide rails are attached on a side wall of a paint booth at different heights one above the other, and the painting robot is movably mounted on an upper level travel guide rail of the two travel guide rails; and

a door opening/closing robot movably mounted on a lower level travel guide rail of the two travel guide rails."

<A-6 method invention>

"A painting method comprising,

by using

a painting robot wherein an automotive body is placed on a conveyor to be moved to a paint booth, and two travel guide rails are attached on a side wall of a paint booth at different heights one above the other, and the painting robot is movably mounted on an upper level travel guide rail of the two travel guide rails,

a door opening/closing robot movably mounted on a lower level travel guide rail of the two travel guide rails, and

a robot control device to perform operation control of the painting robot and the door opening/closing robot:

making, by the robot control device, the door opening/closing robot open a door;

making, by the robot control device, the door opening/closing robot holding the door in an opened state move in a manner to follow up the automotive body; and

making the painting robot paint a portion opened by opening the door."

2 Regarding the ground of opposition 1 (novelty on the basis of A-1 and A-2 to No. 4 as auxiliary evidences) and the ground of opposition 2 (inventive step A-1 as a primary cited document, A-2 to No. 4 as auxiliary evidences, and A-5 as a secondary cited document)

(1) Regarding whether the movie A-1 is one that was made available for public use over telecommunications lines within Japan or in a foreign country prior to the application of the Patent

First, it is examined whether the movie A-1 was made available for public use over telecommunications lines within Japan or in a foreign country prior to the application of the Patent or not. A In the movie A-1, there is no scene that shows that the movie A-1 was made available for public use over telecommunications lines within Japan or in a foreign country prior to the application of the Patent.

B Patent Opponent alleges that A-2 has an indication of "20 June 2013," and thus it is understood that A-2 was made public on the same day. He further alleges that the hyperlink "View Webinar" activates a software called "Go To Webinar Viewer" for viewing the movie A-1 in terms of streaming. However, it cannot be approved that the movie is identical to what was made public on June 20, 2013. Besides, although an ex officio investigation was carried out, it has not been confirmed that the hyperlink "View Webinar" leads to streaming viewing of A-1.

C Patent Opponent cites A-3 and A-4 and alleges that the movie A-1 was made public on June 20, 2013 is supported by a fact that A-3 has the identical content to the movie A-1 and it was used at a lecture in an international conference on June 10, 2013. However, according to A-3 and A-4, it is understood that A-3 was made public on June 10, 2013 only. It does not mean that the movie A-1 was made public on June 20, 2013.

D Therefore, even if taking A-2 to A-4 into consideration as auxiliary evidences, it cannot be said that the movie A-1 made available for public use over telecommunications lines within Japan or in a foreign country prior to the application of the Patent.

(2) Regarding novelty and inventive step

In addition, even if the movie A-1 were made available for public use over telecommunications lines within Japan or in a foreign country prior to the application of the Patent, it is determined that Patent Inventions 1 to 14 contain novelty and inventive step. It is explained below.

A Regarding Patent Invention 1

(A) Comparison

Patent Invention 1 and the A-1 system invention will be compared.

"A device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle" in the A-1 system invention is identical with "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle" in Patent Invention 1 to the extent being "A device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle".

Therefore, the two are identical in the following point.

"A coating system comprising:

a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction, and

a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle."

Then, the two differ in terms of the following points. <Different Feature 1>

Regarding "the device disposed in the coating booth and configured to operate an openable member of a vehicle," Patent Invention 1 has "a movable operation robot <u>having a base disposed</u> in the coating booth <u>below the base of the coating robot, the</u> <u>movable operation robot being movable along the conveyance direction</u> and being configured to operate an openable member of the vehicle," whereas the A-1 system invention has "a device disposed in the coating booth and configured to operate an openable member of a vehicle" (Note by the body: underlines were added by the body).

(B) Judgment

Different Feature 1 will be discussed below.

a The scene between 23'49" and 24'07" of A-1 is shown in the above-mentioned 1(1)A. The remaining parts of A-1 do not disclose "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle" or suggest that robot.

b In addition, the description of A-5 is as the above-mentioned 1(5), and thus there is no description to be a motivation to have, in the A-1 system invention, "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle". c As described above, Different Feature 1 is a substantial different feature, and, furthermore, in the A-1 system invention, there is no motivation to apply the matters described in A-5, and the matter specifying the invention of Patent Invention 1 concerning Different Feature 1 cannot be reached. Therefore, it may not be concluded that the matter specifying the invention of Patent Invention 1 concerning Different Feature 1 cannot be reached. Therefore, it may not be concluded that the matter specifying the invention of Patent Invention 1 concerning Different Feature 1 could have easily been derived by a person skilled in the art.

(C) Summary

Therefore, it cannot be said that Patent Invention 1 is the A-1 system invention (an invention disclosed in A-1), and, in addition, it cannot be said that it is one that could have been easily invented by a person skilled in the art on the basis of the invention disclosed in A-1 and the matters described in A-5.

B Regarding Patent Inventions 2 to 10

Claims 2 to 10 are ones that directly or indirectly refer to Claim 1, and Patent Inventions 2 to 10 are ones that further limit Patent Invention 1. Therefore, as with Patent Invention 1, it cannot be said that these are inventions disclosed in A-1, and, in addition, it cannot be said that these are ones that could have been easily invented by a person skilled in the art on the basis of the invention disclosed in A-1 and the matters described in A-5.

C Regarding Patent Invention 11

(A) Comparison

Patent Invention 11 and the A-1 method invention are compared.

"A device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle" in the A-1 method invention is identical with "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle" in Patent Invention 11 to the extent being "a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle".

In addition, "a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle" in the A-1 method invention is identical with "a robot control device to perform operation control of the coating robot and the movable operation robot" in Patent Invention 11 to the extent of being "a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle".

Further, "comprising: making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by opening the openable member" in the A-1 method invention is identical with "comprising: making, by the robot control device, the movable operation robot open the openable member;

making, by the robot control device, the movable operation robot holding the openable member in an opened state move in a manner to follow up the vehicle; and

making, by the robot control device, the coating robot coat a portion opened by opening the openable member" in Patent Invention 11 to the extent of "comprising: making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by opening the openable member".

Therefore, the two are identical in the following point.

"A coating method comprising,

by using

a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction,

a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle, and

a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle:

making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by opening the openable member."

Then, the two differ in terms of the following points.

<Different Feature 2-1>

Regarding "a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle", Patent Invention 11 has "a

movable operation robot <u>having a base disposed in the coating booth below the base of</u> <u>the coating robot, the movable operation robot being movable along the conveyance</u> <u>direction</u> and being configured to operate an openable member of the vehicle," whereas the A-1 method invention has "a device, disposed in the coating booth, the device being configured to operate an openable member of a vehicle" (Note by the body: underlines were added by the body).

<Different Feature 2-2>

Regarding "a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle," Patent Invention 11 has "a robot control device to perform operation control of the coating robot and the movable operation robot", whereas the A-1 method invention has "a control device to perform operation control of the coating robot and a device to operate an openable member of a vehicle".

<Different Feature 2-3>

Regarding the structure "comprising: making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by opening the openable member", Patent Invention 11 has the structure "comprising: making, by the robot control device, the movable operation robot open the openable member;

making, by the robot control device, the movable operation robot holding the openable member in an opened state move in a manner to follow up the vehicle; and

making, by the robot control device, the coating robot coat a portion opened by opening the openable member," whereas the A-1 method invention has the structure "comprising: making, by the control device, the device to operate an openable member of a vehicle open the openable member; and

making, by the control device, the coating robot coat a portion opened by opening the openable member".

(B) Judgment

First, Different Feature 2-1 will be examined.

a As shown in the above-mentioned A(B)a, in the movie A-1, there is no disclosure about "a movable operation robot having a base disposed in the coating booth below the

base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle", or suggestion that such robot is included.

b As the above-mentioned A(B)b, in A-5, there is no description to be a motivation to have, in the A-1 method invention, "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle", either.

c As described above, Different Feature 2-1 is a substantial different feature, and, in addition, there is no motivation to apply the matters described in A-5 in the A-1 method invention. Therefore, the matter specifying the invention of Patent Invention 11 concerning Different Feature 2-1 is not reached, and it may not be concluded that matters specifying the invention of Patent Invention 11 concerning Different Feature 2-1 could have easily been derived by a person skilled in the art.

(C) Summary

Accordingly, without examining Different Features 2-2 and 2-3, it cannot be said that Patent Invention 11 is the A-1 method invention; that is, the invention disclosed in A-1, and, in addition, it cannot be said that it is an invention that could have been easily invented by a person skilled in the art on the basis of the invention disclosed in A-1 and the matters described in A-5.

In this connection, Patent Opponent alleges that "although, Patent Invention 11 is an invention that is a method that specifically performs an operation by the constitution of Patent Invention 1, it is nothing but a usually performed method when carrying out Patent Invention 1, and thus, so long as Patent Invention 1 does not have novelty in light of Evidence A No. 1, Patent Invention 11 could be easily arrived at by a person skilled in the art." (Written Opposition, page 22, lines 10 to 13). However, as the above-mentioned A, it cannot be said that Patent Invention 1 does not have novelty in light of A-1, and, therefore, the above-mentioned allegation of Patent Opponent cannot be adopted.

D Regarding Patent Inventions 12 to 14

Claims 12 to 14 are ones that directly or indirectly refer to Claim 11, and Patent Inventions 12 to 14 are ones that further limit Patent Invention 11. Therefore, as with Patent Invention 11, these cannot be said to be inventions disclosed in A-1, and, in addition, these cannot be said to be ones that could have been easily invented by a person skilled in the art on the basis of the invention disclosed in A-1 and the matters described in A-5.

(3) Summary regarding the ground of opposition 1 and the ground of opposition 2

As above, Patent Inventions 1 to 14 cannot be said to be inventions made available to the public through electric communication lines in Japan or abroad in advance of the application of the Patent, and, in addition, these cannot be said to be ones that could have been easily invented by a person skilled in the art on the basis of the matters described in A-5 distributed in Japan or abroad in advance of the application of the Patent.

3 Regarding the ground of opposition 3 (inventive step taking A-6 as the primary Cited Document, and A-5 as the Sub-Cited Document)

- (1) Patent Invention 1
- A Comparison

Patent Invention 1 and the A-6 system invention will be compared.

"A painting robot" that is "movably mounted on" "an upper level travel guide rail of two travel guide rails" of a "painting system" "wherein an automotive body is placed on a conveyor to be moved to a paint booth, and the two travel guide rails are attached on a side wall of a paint booth at different heights one above the other" in the A-6 system invention is identical with "a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 1 to the extent of being "a coating robot having a base, the base disposed in a coating booth with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 1 to the extent of being "a coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction".

In addition, "a door opening/closing robot movably mounted on a lower level travel guide rail of the two travel guide rails" of a "painting system" "wherein an automotive body is placed on a conveyor to be moved to a paint booth, and two travel guide rails are attached on a side wall of a paint booth at different heights one above the other" in the A-6 system invention is identical with "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to

operate an openable member of the vehicle" in Patent Invention 1 to the extent of being "a movable operation robot having a base disposed in the coating booth below a base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle".

Therefore, the two are identical in the following points.

"A coating system comprising:

a coating robot having a base, the base being disposed in a coating booth with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction, and

a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle."

Then, the two differ in terms of the following point.

<Different Feature 3>

Regarding "a coating robot having a base, the base disposed in a coating booth with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction", it is "a coating robot having a base, the base <u>being fixed</u> in a coating booth <u>so as not to move</u> with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 1, whereas, in the A-6 system invention, it is "a painting robot" that is "<u>movably mounted on</u>" "an upper level travel guide rail of two travel guide rails" of a "painting system" "wherein an automotive body is placed on a conveyor to be moved to a paint booth, and the two travel guide rails are attached on a side wall of a paint booth at different heights one above the other" (note by the body: underlines were added by the body).

B Judgment

Different Feature 3 is examined.

(A) In [0002], [0003], FIG. 9, and FIG. 10 of A-6 (portions in A-6 describing prior art), although it is described that a "painting robot" is arranged "movably" "on an upper level travel guide rail", there is no statement or suggestion that a "coating robot" is "fixed so as not to move" with respect to a "coating booth".

In addition, in [0004] and [0005] of A-6 (portions in A-6 describing the invention), although it is described that a "painting robot" is movably mounted on a travel guide rail disposed at a position lower than "opener robot", there is no statement or suggestion that the "painting robot" is "fixed so as not to move" with respect to a "paint booth".

Therefore, in A-6, there is no statement or suggestion of the matter specifying the invention of Patent Invention 1 concerning Different Feature 3.

(B) A-5 discloses that in order to reduce the size of the paint booth by eliminating a linear rail system to move the robots to a desired position and orientation, "robots" such as a "painting robot" and an "opener robot" that is disposed below the "painting robot" are fixed to the "columns" of the "paint booth." However, there is no statement or suggestion that the "opener robot" is made "movable", and only the "painting robot" is fixed.

Therefore, in A-5, there is no statement or suggestion of the matter specifying the invention of Patent Invention 1 concerning Different Feature 3.

(C) As described above, even if the matters described in A-5 are applied in the A-6 system Invention, the matter specifying the invention of Patent Invention 1 concerning Different Feature 3 is not reached, and thus it may not be concluded that the matter specifying the invention Patent Invention 1 concerning Different Feature 3 could have easily been derived by a person skilled in the art.

Therefore, it cannot be said that Patent Invention 1 is one that could have been easily invented by a person skilled in the art on the basis of the A-6 system invention; that is, an invention described in A-6, and the matters described in A-5.

(2) Regarding Patent Inventions 2 to 10

Since Claims 2 to 10 are ones that directly or indirectly refer to Claim 1, and Patent Inventions 2 to 10 are ones that further limit Patent Invention 1, it cannot be said that these are ones that could have been easily invented by a person skilled in the art on the basis of the invention described in A-6 and the matters described in A-5, as with Patent Invention 1.

- (3) Regarding Patent Invention 11
- A Comparison

Patent Invention 11 and the A-6 method invention will be compared.

"A painting robot wherein an automotive body is placed on a conveyor to be moved to a paint booth, and two travel guide rails are attached on a side wall of a paint booth at different heights one above the other, and the painting robot is movably mounted on an upper level travel guide rail of the two travel guide rails" in the A-6 method invention is identical with "a coating robot having a base, the base being fixed in a coating booth so as not to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 11 to the extent that "a coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 11 to the extent that "a coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction" in Patent Invention 11 to the extent that "a coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction".

In addition, "a door opening/closing robot movably mounted on a lower level travel guide rail " in the A-6 method invention is identical with "a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle" in Patent Invention 11 to the extent of being "a movable operation robot having a base disposed in the coating booth below a base of the coating robot, the movable operation robot being movable operation robot being movable along the coating booth below a base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle".

Therefore, the two are identical in the following point.

"A coating method comprising,

by using

a coating robot having a base, the base being disposed in a coating booth with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction,

a movable operation robot having a base disposed in the coating booth below the base of the coating robot, the movable operation robot being movable along the conveyance direction and being configured to operate an openable member of the vehicle, and

a robot control device to perform operation control of the coating robot and the movable operation robot:

making, by the robot control device, the movable operation robot open the openable member;

making, by the robot control device, the movable operation robot holding the

openable member in an opened state move in a manner to follow up the vehicle; and

making, by the robot control device, the coating robot coat a portion opened by opening the openable member."

The difference is as follows.

<Different Feature 4>

Regarding "a coating robot having a base, the base disposed in a coating booth with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction", Patent Invention 11 defines "a coating robot having a base, the base <u>being fixed</u> in a coating booth <u>so as not</u> to move with respect to the coating booth, the coating robot being configured to coat a vehicle that is conveyed in a predetermined conveyance direction," whereas the A-6 method invention defines "a painting robot wherein an automotive body is placed on a conveyor to be moved to a paint booth, and two travel guide rails are attached on a side wall of a paint booth at different heights one above the other, and the painting robot is <u>movably mounted on</u> an upper level travel guide rail of the two travel guide rails" (note by the body: the body underlined).

B Judgment

Different Feature 4 is examined.

(A) As shown in the above-mentioned (1)B(A), in A-6, there is no statement or suggestion that a "painting robot" is "fixed so as not to move" with respect to a "paint booth".

Therefore, in A-6, there is no statement or suggestion of the matter specifying the invention of Patent Invention 11 concerning Different Feature 4.

(B) As the above-mentioned (1)B(B), in A-5, there is no statement or suggestion that the "opener robot" is made "movable", and only the "coating robot" is fixed.

Therefore, in A-5, there is no statement or suggestion of the matter specifying the invention of Patent Invention 11 concerning Different Feature 4.

(C) As described above, even if the matters described in A-5 are applied to the A-6 method invention, the matter specifying the invention of Patent Invention 11 concerning Different Feature 4 is not arrived at, and thus it may not be concluded that the matter specifying the invention of Patent Invention 11 concerning Different Feature 4 could

have easily been derived by a person skilled in the art.

Therefore, it cannot be said that Patent Invention 1 is one that could have been easily invented by a person skilled in the art on the basis of the A-6 method invention (an invention described in A-6) and the matters described in A-5.

Further, although the Patent Opponent alleges that "although Patent Invention 11 is an invention that takes a method that specifically performs an operation by the constitution of Patent Invention 1 as an invention, it is nothing but a method to be usually performed when carrying out Patent Invention 1, and thus, so long as Patent Invention 1 does not have novelty due to Evidence A No. 6 and Evidence A No. 5, Patent Invention 11 could be easily arrived at by a person skilled in the art." (Written Opposition, page 26, lines 12 to 15), this allegation by Patent Opponent cannot be adopted because it cannot be said that Patent Invention 1 does not have inventive step due to Evidence A No. 5, as shown in the above-mentioned (1).

(4) Regarding Patent Inventions 12 to 14

Claims 12 to 14 are ones that directly or indirectly refer to Claim 11, and Patent Inventions 12 to 14 are ones that further limit Patent Invention 11. Therefore, as with Patent Invention 11, it cannot be said that these are ones that could have been easily invented by a person skilled in the art on the basis of the invention described in A-6 and the matters described in A-5.

(5) Summary regarding the ground of opposition 3

As above, it cannot be said that Patent Inventions 1 to 14 are ones that could have been easily invented by a person skilled in the art before the application was filed on the basis of the invention described in A-6 and the matters described in A-5, which were distributed in Japan or abroad prior to the application of the Patent.

No. 5 Closing

The Patents for Claims 1 to 14 cannot be revoked according to the grounds and the evidences described in the written opposition.

No other reasons for revoking the patents according to Claims 1 to 14 are found.

Therefore, the decision shall be made as described in the conclusion.

November 27, 2019

Chief administrative judge:SUTO, YasuhiroAdministrative judge:KATO, TomoyaAdministrative judge:OHATA, Michitaka