Appeal decision

Appeal No. 2016-16153

Switzerland
Appellant Sika Technology AG

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The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2013-545358, entitled "Metering and Mixing Device for Multi-Component Substances" [international publication on Jun. 28, 2012: WO2012/085075, national publication of the translated version on Mar. 27, 2014: National Publication of International Patent Application No. 2014-507259] has resulted in the following appeal decision:

Conclusion

The appeal of the case was groundless.

Reason

No. 1 History of the procedures

The present application was originally filed on Dec. 21, 2011 as an International Patent Application date (claim of priority under the Paris Convention was received by the foreign receiving office on Dec. 24, 2010, (EP) Europe Patent Office), a written amendment and a Written statement were submitted on Sep. 26, 2013, reasons for refusal were notified as of Jul. 13, 2015, a written opinion was submitted on Jan. 21, 2016, and, in conjunction with this, a written amendment to amend the scope of claims was submitted. However, a decision of refusal was issued as of Jun. 23, 2016, and, against this, an appeal against the examiner's decision of refusal was requested on Oct. 28, 2016. At the same time as the appeal, a written amendment to amend the scope of claims was submitted, and, then, a written statement was submitted on Apr. 13, 2017.

No. 2 Decision to dismiss the amendment dated Oct. 28, 2016

[Conclusion of Decision to Dismiss Amendment]

The amendment dated Oct. 28, 2016 shall be dismissed.

[Reason]

[1] Details of Amendment

The amendment dated Oct. 28, 2016 (hereinafter, referred to as "the Amendment") is one that amends, regarding the scope of claims, claims 1 to 18 before amendment by the Amendment (that is, the claims amended by the written amendment submitted as of Jan. 21, 2016) shown in the following (a) to claims 1 to 17 shown in the following (b).

(a) Claims 1 to 18 of the scope of claims before the Amendment

"[Claim 1]
A metering and mixing device (1) for a multi-component substance including a material component to be metered in a relatively large quantity and a material component to be metered in a relatively small quantity, comprising:
(a) at least two associated cartridge accommodating devices (2, 3) for accommodating replaceable cartridges (2.1, 3.1) having individual substance components;
(b) a discharging device (4, 5, 8, 9, 11, 16) for simultaneously discharging the substance components from the cartridges (2.1, 3.1) through component outlets by means of discharging pistons that plunge into the cartridge accommodating devices (2, 3) or the cartridges; and
(c) a mixing device (7), which is connected to the component outlets, mixes the discharged substance components, and outputs them in the mixed state, wherein
(d) at least one discharging piston (11) has a thread (11.1) in such a way that the discharging piston (11) can be driven forward by means of the thread when the discharging piston (11) is rotated relative to the cartridge accommodating device (2, 3), and is used for discharging the material component to be metered in a relatively small quantity.
[Claim 2]
The metering and mixing device (1) according to claim 1, wherein
at least one cartridge (3.1) is a hollow cylinder in which at least one substance component is located.
[Claim 3]
The metering and mixing device (1) according to claim 2, wherein
the thread (11. 1) of the at least one discharging piston (11) with thread is in contact with the wall of the at least one cartridge (3.1) of hollow cylindrical shape.
[Claim 4]
The metering and mixing device (1) according to any one of claims 1-2, wherein
the at least one cartridge is a tubular bag (2.1) in which at least one substance component is located.
[Claim 5]
The metering and mixing device (1) according to claim 4, wherein

the thread (11.1) of the at least one discharging piston (11) for the cartridge accommodating device (3) in which a tubular bag can be inserted as a cartridge is in contact with a wall of the cartridge accommodating device.

[Claim 6]

The metering and mixing device (1) according to any one of claims 1-5, wherein

the at least one cartridge accommodating device (2, 3) comprises a hollow cylinder.

[Claim 7]

The metering and mixing device (1) according to any one of claims 1-6, wherein

the at least one discharging piston (11, 16) has the outer thread (11.1).

[Claim 8]

The metering and mixing device (1) according to claim 7, wherein,

in the at least one cartridge accommodating device (3) or the cartridge (3.1) in which the at least one discharging piston (11) with the outer thread (11.1) is located, a corresponding counterpart thread with respect to the outer thread of the discharging piston (11) is present.

[Claim 9]

The metering and mixing device (1) according to any one of claims 1-8, wherein

the thread (11.1) of the at least one discharging piston (11) is configured so that it is self cutting, in such a way that it itself cuts or punches a corresponding counterpart thread into an internal wall of the cartridge accommodating device (3) or the cartridge.

[Claim 10]

The metering and mixing device (1) according to any one of claims 1-9, wherein

the at least one discharging piston (16) comprises a linear forward driven discharge bar (4) for discharging the material component to be metered in a relatively large quantity.

[Claim 11]

The metering and mixing device (1) according to claim 10, wherein

the linear forward driven discharge bar (4) comprises regular toothing with which a gear wheel or a spindle thread can engage for forward driving.

[Claim 12]

The metering and mixing device (1) according to claim 10, wherein

the linear forward driven discharge bar (4) comprises a spindle thread with which toothing can engage.

[Claim 13]

The metering and mixing device (1) according to any one of claims 1-12, wherein

at least one of the discharging pistons (11, 16) comprises a ventilation device.

[Claim 14]

The metering and mixing device (1) according to any one of claims 1-12, wherein

at least one of the cartridge accommodating devices (2, 3) or the cartridges

(2.1, 3.1) comprises a ventilation device (14).
[Claim 15]
The metering and mixing device (1) according to claim 14, wherein,
as a ventilation device, in the rear portion of the inner side of the at least one cartridge accommodating device (2, 3) or the cartridge (2.1, 3.1), at least one ventilation groove (14) is countersunk.
[Claim 16]
The metering and mixing device (1) according to claim 10, wherein
the mixing device (7) is a dynamic mixer.
[Claim 17]
The metering and mixing device (1) according to claim 16, comprising
a single common gear driver: for giving linear forward drive to the at least one discharging piston (16) comprising the linear forward driven discharge bar (4); for giving rotary drive to the at least one discharging piston (11) having the thread (11.1); and for giving rotary drive to the dynamic mixer.
[Claim 18]
The metering and mixing device (1) according to claim 1, wherein a quantity ratio between the material component to be metered in a relatively large quantity and the material component to be metered in a relatively small quantity is 50 or more to 1."

(b) Claims 1 to 17 of the scope of claims after the Amendment

"[Claim 1]
A metering and mixing device (1) for a multi-component substance including a material component to be metered in a relatively large quantity and a material component to be metered in a relatively small quantity, comprising:
(a) at least two associated cartridge accommodating devices (2, 3) for accommodating replaceable cartridges (2.1, 3.1) having individual substance components;
(b) a discharging device (4, 5, 8, 9, 11, 16) for simultaneously discharging the substance components from the cartridges (2.1, 3.1) through component outlets by means of discharging pistons that plunge into the cartridge accommodating devices (2, 3) or the cartridges; and
(c) a mixing device (7), which is connected to the component outlets, mixes the discharged substance components, and outputs them in the mixed state, wherein
a quantity ratio between the material component to be metered in a relatively large quantity and the material component to be metered in a relatively small quantity is 50 or more to 1, and wherein
(d) at least one discharging piston (11) has a thread (11.1) in such a way that the discharging piston (11) can be driven forward by means of the thread when the discharging piston (11) is rotated relative to the cartridge accommodating device (2, 3), and is used for discharging the material component to be metered in a relatively small quantity.
[Claim 2]
The metering and mixing device (1) according to claim 1, wherein
at least one cartridge (3.1) is a hollow cylinder in which at least one substance component is located.

[Claim 3]

The metering and mixing device (1) according to claim 2, wherein

the thread (11. 1) of the at least one discharging piston (11) with thread is in contact with the wall of the at least one cartridge (3.1) of hollow cylindrical shape.

[Claim 4]

The metering and mixing device (1) according to any one of claims 1-2, wherein

the at least one cartridge is a tubular bag (2.1) in which at least one substance component is located.

[Claim 5]

The metering and mixing device (1) according to claim 4, wherein

the thread (11.1) of the at least one discharging piston (11) for the cartridge accommodating device (3) in which a tubular bag can be inserted as a cartridge is in contact with a wall of the cartridge accommodating device.

[Claim 6]

The metering and mixing device (1) according to any one of claims 1-5, wherein

the at least one cartridge accommodating device (2, 3) comprises a hollow cylinder.

[Claim 7]

The metering and mixing device (1) according to any one of claims 1-6, wherein

the at least one discharging piston (11, 16) has the outer thread (11.1).

[Claim 8]

The metering and mixing device (1) according to claim 7, wherein,

in the at least one cartridge accommodating device (3) or the cartridge (3.1) in which the at least one discharging piston (11) with the outer thread (11.1) is located, a corresponding counterpart thread with respect to the outer thread of the discharging piston (11) is present.

[Claim 9]

The metering and mixing device (1) according to any one of claims 1-8, wherein

the thread (11.1) of the at least one discharging piston (11) is configured so that it is self cutting, in such a way that it itself cuts or punches a corresponding counterpart thread into an internal wall of the cartridge accommodating device or the cartridge.

[Claim 10]

The metering and mixing device (1) according to any one of claims 1-9, wherein

the at least one discharging piston (16) comprises a linear forward driven discharge bar (4) for discharging the material component to be metered in a relatively large quantity.

[Claim 11]

The metering and mixing device (1) according to claim 10, wherein

the linear forward driven discharge bar (4) comprises regular toothing with which a gear wheel or a spindle thread can engage for forward driving.

[Claim 12]

The metering and mixing device (1) according to claim 10, wherein

the linear forward driven discharge bar (4) comprises a spindle thread with which toothing can engage.

[Claim 13]

The metering and mixing device (1) according to any one of claims 1-12, wherein

at least one of the discharging pistons (11, 16) comprises a ventilation device.

[Claim 14]

The metering and mixing device (1) according to any one of claims 1-12, wherein

at least one of the cartridge accommodating devices (2, 3) or the cartridges (2.1, 3.1) comprises a ventilation device (14).

[Claim 15]

The metering and mixing device (1) according to claim 14, wherein,

as a ventilation device, in the rear portion of the inner side of the at least one cartridge accommodating device (2, 3) or the cartridge (2.1, 3.1), at least one ventilation groove (14) is countersunk.

[Claim 16]

The metering and mixing device (1) according to claim 10, wherein

the mixing device (7) is a dynamic mixer.

[Claim 17]

The metering and mixing device (1) according to claim 16, comprising

a single common gear driver: for giving linear forward drive to the at least one discharging piston (16) comprising the linear forward driven discharge bar (4); for giving rotary drive to the at least one discharging piston (11) having the thread (11.1); and for giving rotary drive to the dynamic mixer."

(Note that the underlines were given by the Appellant to indicate amended portions)

[2] Purpose of the Amendment

The Amendment is an amendment that limits, regarding claim 1 of the scope of claims, "a material component to be metered in a relatively large quantity and a material component to be metered in a relatively small quantity" which is a matter specifying the invention of claim 1 of the scope of claims before the Amendment as "a quantity ratio between the material component to be metered in a relatively large quantity and the material component to be metered in a relatively small quantity is 50 or more to 1", and, in addition, the field of industrial application and the problems to be solved are identical between the invention described in claim 1 before the Amendment and the invention described in claim 1 after the Amendment.

Since the Amendment includes limitation of matters specifying the invention of the invention according to claim 1 of the scope of claims before the Amendment, the Amendment falls under the category of ones for the purpose of restriction of the scope of claims prescribed in Article 17-2(5)(ii) of the Patent Act.

Therefore, whether the Appellant should be granted a patent for the invention described in claim 1 after the Amendment (hereinafter, referred to as "the Amended Invention") independently at the time of patent application or not will be examined hereinafter.

[3] Judgment on independent requirements for patentability

1. Publications

(1) Publication 1

A Described matters in Publication 1

There are described the following matters together with drawings in Japanese Unexamined Patent Application Publication No. H8-57384 (hereinafter, referred to as "Publication 1") that is a publication distributed before the priority date of the present application and was cited in the reasons for refusal stated in the examiner's decision.

a) "[0001]
[Industrial Application Field] The present invention relates to a two-pack type mixing and discharge device for mixing and discharging two different liquids such as two-pack type adhesive agents, coating materials, and the like to a destination part by manual operation, and is an invention that aims at providing a device superior in workability." (Paragraph [0001])

b) "[0014]
[Examples] When examples of the present invention are described in drawings hereinafter, (1) is a pair of storage cylinders, and is made to be able to store a two-liquid mixture product such as two-pack type adhesive agents, coating materials, and the like separately. For example, when a two-pack type adhesive agent is used, a curing agent may be stored in one of the storage cylinders (1) shown in FIG. 1, and the main agent in the other one of the storage cylinders (1).
[0015] Each of the storage cylinders (1) is formed into a cylindrical shape, and one end thereof is opened to form a cylinder aperture (2). In addition, the storage cylinder (1) form an insertion plug (3) that can be inserted into inside therein in a state sealing the cylinder aperture (2) as shown in FIG. 1. In addition, each of the storage cylinders (1) forms a communicating port (4) at the tip thereof, and enables connection of the communicating port (4) to a discharge nozzle (6) of a main body casing (5).
[0016] The main body casing (5) forms, as shown in FIG. 1 and FIG. 2, an insertion space (7) capable of storing the pair of storage cylinders (1) in a state positioning the cylinders in parallel. In addition, the insertion space (7) is provided with a placing holder (8) capable of being in contact with the under surfaces of the storage cylinders (1). Also, in the main body casing (5), a front part wall (10) is located in the front side of the insertion space (7). The front part wall (10) forms distribution ports (11) connectable to the communicating port (4) of each of the storage cylinders (1) in a penetrating manner. Furthermore, each of the distribution ports (11) is configured to be in communication with the discharge nozzle (6) located at the tip of the main body casing (5), and enables delivery, to the outside, of a two-liquid mixture product mixed in the discharge nozzle (6).
[0017] The main body casing (5) includes, at the lower end of the front part wall (10), a grip part (13) that can be held by an operator and that is arranged in a firmly protruding

manner as shown in FIG. 1. Formation of the grip part (13) enables an operator to guide the tip of the discharge nozzle (6) to a discharge target accurately.
[0018] In addition, the main body casing (5) pivotally supports a rotation pin (14) at its under surface, and rotatably connects with an operation casing (15) via the rotation pin (14). By connecting the operation casing (15) and the main body casing (5), a gear storage part (16) is formed inside.
[0019] Furthermore, inside the gear storage part (16), there are formed, as shown in FIG. 1 and FIG. 3: a pair of parallel piston rods (17) capable of pressurizing a two-liquid mixture product within the storage cylinders (1); gear mechanisms (18) connected to the piston rods (17) and having different operation ratios respectively; and a manual operation part (20) enabling co-operation between each of the gear mechanisms (18). Hereinafter, the inside configuration of the gear storage part (16) will be described in detail." (Paragraphs [0014] to [0019])

c) "[0025] In addition, the other gear mechanism (18b) connected to one of the piston rods (17) to be used for a main agent is provided with a rack gear part (26), a pinion gear part (31), a speed change gear (36), and an intermediate gear (32). The gear mechanism (18b) forms the pinion gear part (31) capable of engaging with the rack gear part (26). The pinion gear part (31) has fewer gears than the pinion gear part (31) to be used for a curing agent, and makes a driven shaft (33) to be inserted into its axis center." (Paragraph [0025])

d) "[0031] When mixing such as an adhesive agent, coating materials, and the like of two-pack type and discharging it to a destination part in a device configured as described above, two liquids that are discharge targets are stored in the pair of storage cylinders (1) separately. In this case, when a two-pack type adhesive agent is used, a curing agent is stored in one storage cylinder (1a), and a main agent is stored in the other storage cylinder (1b)." (Paragraph [0031])

e) "[0035] For example, the one gear mechanism (18a) to perform pressurization operation for the curing agent rotates a pinion gear part (31a) by an intermediate gear (32a). Also, a piston rod (17a) that has made a rack gear part (26a) engage with the pinion gear part (31a) makes a pressurization part (25a) in the tip protrude.
[0036] In concurrence with the action of the above-mentioned one gear mechanism (18a), the other gear mechanism (18b) to perform pressurization operation of a main agent rotates the speed change gear (36) by an intermediate gear (32b). Then, the driven shaft (33) connected to the speed change gear (36) makes a pinion gear part (31b) co-rotate. In addition, a piston rod (17b) to make a rack gear part (26b) engage with a pinion gear part (31b) makes a pressurization part (25b) in its tip protrude.
[0037] Then, by making the gear mechanisms (18) co-move, the pair of piston rods (17) make the pressurization parts (25) butt against the outside faces of the insertion plugs (3). In addition, the gear mechanisms (18), as described above, are formed in such a way that operation ratios are different from each other. For that reason, the pressurization parts (25) press, at speeds proportional to operation ratios of the gear mechanisms (18), the insertion plugs (3) to the inside of the storage cylinders (1), and, through this insertion plugs (3), press and move two liquids in the storage cylinders (1) by different distances, respectively.

[0038] In addition, the pressurized two-pack type mixture product is pushed out from each of the insertion ports (4) of the storage cylinders (1) with volumes proportional to the pressed distances, and moved to the distribution ports (11). Then, the pressurized two-pack type mixture product is mixed inside the discharge nozzle (6), and it becomes possible to discharge it to the destination part. For example, if the one gear mechanism (18a) and the other the gear mechanism (18b) are formed at an operation distance ratio of 2:1, a mixing ratio of a two-pack type mixture product to be mixed and discharged from the two storage cylinders (1) is 2:1 in a similar fashion if the section areas thereof are the same, and, therefore, it becomes possible to mix and discharge two liquids at different ratios." (Paragraphs [0035] to [0038])

B Matters that can be understood from the above-mentioned A and the drawings

a) According to statements of d) and e) of the above-mentioned A, it can be seen that the invention is a device that discharges a curing agent and a main agent at the same time.

C Invention described in Publication 1

When the above A and B are put together, it is recognized that there is described, in Publication 1, the following invention (hereinafter, referred to as "Invention Described in Publication 1").

<Invention Described in Publication 1>

"A two-pack type mixing and discharge device for a two-liquid mixture product including a curing agent and a main agent, comprising:

(a) one body casing 5 for housing storage cylinders 1 having the curing agent and the main agent;

(b) a manual operation part 20, gear mechanisms 18, and piston rods 17 for discharging the curing agent and the main agent simultaneously from the storage cylinders 1 through communicating ports 4 by insertion plugs 3 inserted in the storage cylinders 1; and

(c) a discharge nozzle 6, connected to the communicating ports 4, for mixing the curing agent and the main agent to be discharged, and discharging the curing agent and the main agent in a mixed state, wherein

a quantity ratio between the curing agent and the main agent is 2:1, and wherein

(d) the piston rods 17 are connected to the gear mechanisms 18 in such a way that the piston rods 17 can be pressed and moved by the gear mechanisms 18."

(2) Publication 2

In National Publication of International Patent Application No. 2008-534175 (hereinafter, referred to as "Publication 2") that is a publication distributed before the priority date of the present application and cited in the reasons for refusal stated in the examiner's decision, there are described the following matters along with drawings.

a) "[0018]
II. Exemplary Syringe Delivery Systems

Figures 1A and 1B illustrate, respectively, an exploded view and an assembled cross sectional view of a syringe delivery system 100. The syringe delivery system 100 includes a syringe barrel 102, having a delivery opening 104, and a plunger 106 including a threaded shaft 108. The threaded shaft threadably engages a threaded nut 103 which itself threadably engages and may form part of the syringe barrel 102, so as to allow a user to selectively dispense a viscous material through the delivery opening 104.

[0019]

The syringe delivery system 100 further includes a plunger gripping member 110. The plunger gripping member 110 is in gripping communication with the plunger 106 via level indicator tabs 120 and gripping tabs 121 of the plunger 106 and receiving grooves formed on an inside surface of the plunger gripping member 110. Grooves 123, which mate with level indicator tabs 120, can be seen in Figure 1B. Another pair of grooves (not seen) formed on an inside surface of the plunger gripping member 110 mate with gripping tabs 121. The plunger gripping member 110 includes a sheath 112 that covers the threaded shaft 108 of the plunger 106, so as to shield the plunger 106 and the threaded shaft 108 beneath the sheath 112. The sheath 112 provides a sealed environment for threaded shaft 108 so as to prevent entrance or contamination by foreign matter." (Paragraphs [0018] and [0019])

b) "[0026]

According to one embodiment, the syringe delivery system 100 may include a dynamic seal 126 between the plunger gripping member 110 and the syringe barrel 102. Such a dynamic seal 126 may be formed of any suitable flexible material (e.g., a thermoplastic elastomer). The dynamic seal 126 forms a tight seal between the plunger gripping member 110 and the syringe barrel 102 so as to prevent entrance or contamination by foreign matter as the syringe barrel 102 is rotated relative to the plunger gripping member 110 during delivery of the dental composite or other highly viscous material" (Paragraph [0026])

(3) Publication 3

In the Description of the United States Patent No. 4863072 (hereinafter, referred to as "Publication 3"), which was cited in the reasons for refusal stated in the examiner's decision and is a publication distributed before the priority date of the present application, there are described the following matters along with drawings.

a) "Referring to FIG. 1, a composite delivering syringe 10 constructed as in accordance with the present invention is illustrated. As shown in FIG. 2, syringe 10 comprises a tube or cylinder 12, a plunger 14, and slider 16.

As illustrated in FIGS. 2 and 3, plunger 14 includes a disc-shaped end portion 18 which is formed integrally with a shank 20 having threads 22 formed therein. Composite extrusion element 29 and O-ring 23 insure that all of the composite material

advances forward as the device is operated. Disk 18 has a diameter on the order of about 4 centimeters.

As illustrated in FIGS. 2 and 4, cylinder 12 has a faceted external cross section forming, in the illustrated embodiment, six facets 26, 28, 30, 32, 34, and 36. The inner surface of the cylinder is circular with threads 38 defined thereby. Threads 38 in cylinder 12 mate with threads 22 on plunger 14. Cylinder 12 is terminated at one end by an open port 40 having an annular bead 42 and is terminated at the other end by a feeder nozzle 44 having a surface 46 which conforms to surface 24 on composite extrusion element 29. It is noted that composite extrusion element 29 has a cylindrical surface 48 which exactly fits in the forward portion of nozzle 44.

As shown in FIG. 5, slider 16 has a hole 52 which mates with the outside surface of cylinder 12 defined in FIG. 4 by facets 26, 28, 30, 32, 34, and 36. Thus slider 16 is free to move along the body of cylinder 12 in the direction indicated in FIG. 2 by arrow 54 but is constrained from angular rotation with respect to cylinder 12.

During use, plunger 14 is positioned within cylinder 12 in the position illustrated in solid and phantom lines in FIG. 1. The space between surface 24 and mating surface 46 is filled with light-curable composite dental filling material 50.

FIG. 6 is an exploded view of the male front piece-O-ring-composite extrusion element system. O-ring 23 fits around male front piece 21 and sits up against edge of plunger shaft 27. Thus, O-ring 23 can only be urged forward by the edge of plunger shaft 27 and will not be retracted should the plunger be reverse screwed. Male front piece 21 mates with female fitting 25 of composite extrusion element 29. Male front piece 21 and thus the plunger 14 are free to rotate and slide relative to composite extrusion element 29. Thus, the composite extrusion element 29 will only be advanced by the forward action of the plunger 14 and will not be retracted with the plunger 14 should the shaft be reverse screwed.

When it is desired to use the inventive package, the syringe 10 is firmly grasped in the hand of the dentist. The pad of the thumb and the side of the index finger are used to rotate slider 16, while the remaining fingers securely grasp disk 18, thus resulting in relative angular movement between the plunger 14 and the cylinder 12. The necessary leverage is provided by making slider 16 with a length of approximately 4 centimeters." (Column 3, line 21 to Column 4, line 8)

2. Comparison / judgment

As viewed from its constitution, technical significance, and function, "curing agent" in Invention Described in Publication 1 corresponds to "material component to be metered in a relatively large quantity" in the Amended Invention, and, in a similar fashion, "main agent" corresponds to "material component to be metered in a relatively small quantity", "two-liquid mixture product" to "multi-component substance", "two-pack type mixing and discharge device" to "metering and mixing device", "curing agent and main agent" to "individual substance components" or "substance components", "the storage cylinders 1" to "replaceable cartridges" or "cartridges", "insertion plugs 3 inserted in the storage cylinders 1" to "discharging pistons that plunge into the cartridge accommodating devices or the cartridges", "the communicating ports 4" to "component outlets", "discharge" to "discharge" or "output", and "manual operation part 20, gear mechanisms 18, piston rods 17" to "discharging device", "discharge nozzle 6" to

"mixing device", respectively.

In addition, "one body casing 5" in the Invention Described in Publication 1 and "at least two associated cartridge accommodating devices" in the Amended Invention are common in a point of being "cartridge accommodating devices".

Moreover, that "the piston rods 17 are connected to the gear mechanisms 18 in such a way that the piston rods 17 can be pressed and moved by the gear mechanisms 18" in the Invention Described in Publication 1, and that "at least one discharging piston has a thread in such a way that the discharging piston can be driven forward by means of the thread when the discharging piston is rotated relative to the cartridge accommodating device" in the Amended Invention are common in a point that "at least one discharging piston is connected to a drive mechanism in such a way that the discharging piston can be driven forward by means of the drive mechanism".

In view of the above, the Amended Invention and the Invention Described in Publication 1 are identical in the points of each being

"A metering and mixing device for a multi-component substance including a material component to be metered in a relatively large quantity and a material component to be metered in a relatively small quantity, comprising:

(a) a cartridge accommodating devices for accommodating replaceable cartridges having individual substance components;

(b) a discharging device for simultaneously discharging the substance components from the cartridges through component outlets by means of discharging pistons that plunge into the cartridge accommodating devices or the cartridges; and

(c) a mixing device, which is connected to the component outlets, mixes the discharged substance components, and outputs them in the mixed state, wherein

(d) at least one discharging piston is connected to a drive mechanism in such a way that the discharging piston can be driven forward by means of the drive mechanism."

, and differ in terms of the following points.

<Different feature 1>

A point that the "cartridge accommodating device" of the Amended Invention is "at least two associated" ones, whereas,

the "body casing 5" of Invention Described in Publication 1 is just one, and is not at least two associated ones.

<Different feature 2>

A point that, "a quantity ratio between the material component to be metered in a relatively large quantity and the material component to be metered in a relatively small quantity is 50 or more to 1" in the Amended Invention, and, in addition, regarding the point of the above-mentioned "at least one discharging pistons is connected to a drive mechanism in such a way that the discharging piston can be driven forward by means of the drive mechanism", and the Amended Invention is one in which "at least one discharging piston has a thread in such a way that the discharging piston can be driven forward by means of the thread when the discharging piston is rotated relative to

the cartridge accommodating device, and is used for discharging the material component to be metered in a relatively small quantity", whereas,

in Invention Described in Publication 1, the quantity ratio between a curing agent and a main agent is 2:1, and, in addition, regarding the point of the above-mentioned "at least one discharging piston is connected to a drive mechanism in such a way that the discharging piston can be driven forward by means of the drive mechanism", the Invention Described in Publication 1 is one in which the piston rods 17 are connected to the gear mechanisms 18 in such a way that the piston rods 17 can be pressed and moved by the gear mechanisms 18.

The above different features will be discussed below.

Regarding <Different feature 1>

It is a matter that can be selected by a person skilled in the art accordingly whether to house, on the occasion of housing a plurality of cartridges in an accommodating device, each of the plurality of cartridges in an individual accommodating device and couple these accommodating devices, or, instead, house the plurality of cartridges in one accommodating device, and thus it is nothing but a matter that could have been achieved by a person skilled in the art accordingly to make, in the Invention Described in Publication 1, the storage cylinder 1 for a curing agent and the storage cylinder 1 for a main agent be housed in individual casings respectively, and connect the two casings.

Regarding <Different feature 2>

It is a matter of common general technical knowledge in the general machine field that, in a drive mechanism, screw mechanisms have a smaller driven amount relative to an operation amount and thus enable finer adjustment as compared with gear mechanisms, fluid pressure drive mechanisms, and the like, and, in devices that discharge a material component of a fixed quantity, ones adopting a drive mechanism by a screw are well-known (hereinafter, referred to as "Well-Known Art") as described in Publication 2 and Publication 3, for example.

Then, in the Invention Described in Publication 1, on the occasion of metering and discharging a plurality of material components, a quantity ratio at which those material components should be discharged is set by the type of a mixture product to be produced, and it is a matter that could be conceived of normally by a person skilled in the art to, when it is a mixture product having a quantity ratio of 50 or more to 1, a material component to be metered in a small quantity should be metered precisely, and, on this occasion, it would have been achieved by a person skilled in the art with ease to adopt a screw mechanism instead of a gear mechanism by employing Well-Known Art.

From the above, it is a matter that could have been conceived of with ease by a person skilled in the art to make, by applying Well-Known Art, the Invention Described in Publication 1 have the matter specifying the invention of the Amended Invention concerning Different feature 2.

Then, even when examined as a whole, the Amended Invention does not provide specific effect beyond effect predicted on the basis of the Invention Described in Publication 1 and Well-Known Art.

Accordingly, the Amended Invention could have been invented by a person skilled in the art with ease based on the Invention Described in Publication 1 and Well-Known Art, and, therefore, the appellant should not be granted a patent for that independently at the time of patent application under the provisions of Article 29(2) of the Patent Act.

3. Closing

As above, the Amendment violates the provisions of Article 126(7) of the Patent Act as applied mutatis mutandis pursuant to the provisions of Article 17-2(6) of the same Act, and thus it should be dismissed under the provisions of Article 53(1) of the same Act which is applied mutatis mutandis pursuant to the provisions of Article 159(1) of the same Act.

Therefore, the decision shall be made as described in [Conclusion of Decision to Dismiss Amendment].

No. 3 Regarding the Invention

1. The Invention

Since, the amendment dated Oct. 28, 2016 was dismissed as above, the inventions according to claims 1 to 18 of the scope of claims of the present application are recognized as ones specified by the matters described in claims 1 to 18 of the scope of claims amended by the written amendment dated Jan. 21, 2016, and the invention according to claim 1 (hereinafter, referred to as "the Invention") among these is as described in claim 1 indicated in the above-mentioned No. 2 [Reason] [1](a).

2. Publication

In Publication 1 (Japanese Unexamined Patent Application Publication No. H8-57384) cited in the reasons for refusal stated in the examiner's decision, the invention as described in the above-mentioned No. 2 [Reason] [3]1.(1) is described.

3. Comparison / judgment

The Invention corresponds to one that eliminates, among the matters specifying the Invention of the Amended Invention examined in the above-mentioned No. 2 [Reason] [2], the matter specifying the Invention that "a quantity ratio between the material component to be metered in a relatively large quantity and the material component to be metered in a relatively small quantity is 50 or more to 1".

Then, since the Amended Invention that includes all the matters specifying the invention of the Invention could have been invented by a person skilled in the art with ease based on the Invention Described in Publication 1 and Well-Known Art as has been

described in the above-mentioned No. 2 [Reason] [3], also the Invention could have been invented by a person skilled in the art with ease based on the Invention Described in Publication 1 and Well-Known Art by a similar reason.

Then, even when examined as a whole, the Invention does not provide specific effect beyond effect predicted on the basis of the Invention Described in Publication 1 and Well-Known Art.

4. Summary

As above, the Invention could have been invented by a person skilled in the art with ease based on the Invention Described in Publication 1 and Well-Known Art, and, therefore, the appellant should not be granted a patent in accordance with the provisions of Article 29(2) of the Patent Act.

No. 4 Closing

As stated in the above-mentioned No. 3, the appellant should not be granted a patent for the Invention in accordance with the provisions of Article 29(2) of the Patent Act, and, thus the present application should be rejected without examining the inventions according to the other claims of the present application.

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

September 20, 2017

Chief administrative judge: KANAZAWA, Toshio
Administrative judge: SASAKI, Yoshie
Administrative judge: MAKIHARA, Susumu