Trial decision

Invalidation No. 2018-800058

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The case of a trial regarding the invalidation of Japanese Patent No. 6291518, entitled "FLUID PRESSURE CYLINDER AND CLAMP DEVICE" between the parties above has resulted in the following trial decision.

Conclusion

The patent regarding the invention according to claims of Japanese Patent No. 6291518 shall be invalidated.

The costs in connection with the trial shall be borne by the demandee.

Reason

No. 1 Main history of the procedures

The main history of the procedures regarding the invention according to Claims 1 to 5 of the Patent No. 6291518 is as follows.

October 7, 2011 Submission of Japanese Patent Application No.

2011-222846 (hereinafter referred to as "the further previous original application")

July 26, 2013 Submission of divisional patent application based on the further previous original application (Japanese Patent Application No. 2013-155444, hereinafter referred to as "the previous original application")

September 24, 2015 Submission of divisional patent application based on the previous original application (Japanese Patent Application No. 2015-186531, hereinafter referred to as "the original application")

April 11, 2016 Submission of divisional application based on the original application (Japanese Patent Application No. 2016-78545, hereinafter referred to as "the Application")

May 10, 2016	Submission of Written amendment
May 30, 2017	Notice of reasons for refusal (new matter, or the
like)	
October 5, 2017	Submission of Written opinion
February 16, 2018	Registration of establishment of the patent right
of the Patent	
March 14, 2018	Issuance of patent publication of the Patent
(Japanese Patent Publication No. 62	91518)
May 11, 2018	Demand for invalidation trial of the case
July 27, 2018	Submission of Written reply of the trial case
August 31, 2018	Notification of matters to be examined
October 1, 2018	Submission of Oral proceedings statement brief
(Demandant)	
October 1, 2018	Submission of Oral proceedings statement brief
(Demandee)	
October 15, 2018	Oral proceeding
November 2, 2018	Advance notice of trial decision
No response was made to	the advance notice of the trial decision.

No. 2 Inventions according to Claims 1 to 5 of the Patent

The inventions according to Claims 1 to 5 of the Patent (hereinafter referred to as "Patent invention 1" to "Patent invention 5") are acknowledged as follows as described in Claims 1 to 5 of the Scope of Claims of the Patent.

"[Claim 1]

A fluid pressure cylinder comprising:

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a cylinder body;

an output member equipped to move forward or rearward with respect to the cylinder body;

a fluid chamber for driving the output member in at least one of forward and rearward directions;

an air passage formed in the cylinder body in which compressed air is supplied to one end and the other end is communicated with the surroundings; and

an opening or closing valve mechanism capable of opening or closing the air passages, wherein

the opening or closing valve mechanism comprises:

a valve body mounted to move forward or rearward in a mounting hole formed in the cylinder body and including a valve main body integrated with a small-diameter shaft part and a large-diameter shaft part arranged opposite the fluid chamber with respect to the small-diameter shaft part;

an elastic member which elastically biases the large-diameter shaft part of the valve body toward the fluid chamber to hold the valve body advanced toward the fluid chamber;

an annular member arranged in the middle part of the mounting hole of the cylinder body and having a through hole through which the small-diameter shaft part of the valve main body passes;

a cap member fixed in an open-side of the mounting hole and having a recess into which the large-diameter shaft part of the valve main body is inserted;

a housing chamber formed between the annular member and the cap member to house the valve body;

a first air passage formed to extend in a radial direction of the annular member to allow the housing chamber to communicate with the one end of the air passage; and

a second air passage formed in the cap member to allow the housing chamber to communicate with the other end of the air passage, wherein

when the output member is not located in a predetermined position, the opening or closing valve mechanism holds the valve body advanced toward the fluid chamber and maintains an opened state to open the first air passage and the second air passage,

when the output member reaches the predetermined position, the valve body is moved by the output member to change the opened/closed state of the opening or closing valve mechanism to a closed state to close the first air passage and the second air passage, and it can be detected that the output member reaches the predetermined position through air pressure in the air passage.

[Claim 2]

The fluid pressure cylinder described in Claim 1, wherein

the opening or closing valve mechanism further includes a valve seat which can be brought into contact with the valve body,

the valve body includes a movable valve body externally mounted on the valve main body and moved close to or apart from the valve seat.

[Claim 3]

The fluid pressure cylinder described in Claim 1 or Claim 2 further comprising:

a first seal member arranged on the outer periphery of the small-diameter shaft part to seal between the fluid chamber and the housing chamber; and

a second seal member to seal between the inside and the surroundings of the mounting hole closed by the cap member.

[Claim 4]

The fluid pressure cylinder described in any one of Claim 1 to Claim 3, wherein the predetermined position is one of a rising limit, an operation halfway point, and a lowering limit of the output member.

[Claim 5]

A clamp device including a clamp rod formed of the output member and configured to drive the clamp rod by the fluid pressure cylinder described in Claim 4."

No. 3 Reasons for invalidation, reply to the reasons for invalidation, and means of proof 1. Object of the demand alleged by the demandant and Reasons for invalidation 1 and 2

According to the written demand for trial (hereinafter referred to as "Written demand") and the oral proceedings statement brief dated October 1, 2018 (hereinafter referred to as "Demandant's brief"), the object of the demand alleged by the demandant is to demand the decision that the patent for the Patent inventions according to Claims 1 to 5 shall be invalidated. The outline of the reasons for invalidation 1 and 2 is as follows.

(1) Reason for invalidation 1 (Article 17-2(3) of the Patent Act)

The amendment made by the written amendment submitted by the demandee on May 10, 2016 (hereinafter referred to as "the Amendment") does not fall within the scope of matters described in the Specification, the Scope of Claims, and the Drawings originally attached to the application (hereinafter referred to as "Originally attached Specification, etc."), and does not satisfy the requirements stipulated in Article 17-2(3) of the Patent Act (Addition of new matter). Thus, Patent Inventions 1 to 5 fall under Article 123(1)(i) of the Patent Act and should be invalidated.

(2) Reason for invalidation 2 (Article 36(6)(i) of the Patent Act)

Patent Inventions 1 to 5, which are not described in the Detailed Description of the Invention in the Originally attached Specification, etc., do not satisfy the requirements stipulated in Article 36(6)(i) of the Patent Act (Violation of requirements for support). Thus, Patent Inventions 1 to 5 fall under Article 123(1)(iv) of the Patent Act and should be invalidated.

2. Object of reply alleged by the demandee

According to the written reply of the trial case dated July 27, 2018 (hereinafter referred to as "Written reply") and the oral proceedings statement brief dated October 1, 2018 (hereinafter referred to as "Demandee's brief"), the object of the demandee's reply is to demand the decision that the demand for trial of the case is groundless.

3. Means of proof

(1) Demandant's means of proof

The demandant submitted the following Evidences A No. 1-1 to No. 5-4, as means of proof, together with the written demand for trial. The demandant also submitted Evidence A No. 6 together with the Demandant's brief.

Evidence A No. 1-1: Specification originally attached to the Application

Evidence A No. 1-2: Scope of Claims originally attached to the Application

Evidence A No. 1-3: Drawings originally attached to the Application

Evidence A No. 2: Specification of U. S. Patent No. 2949098 and translation thereof

Evidence A No. 3-1: Fact experiment authentic document, 2017 No. 193 (created by a notary, Yasuhiro SHIMONO)

Evidence A No. 3-2: Copy of cross-sectional diagram of LL-RM/RN linear cylinder, created on June 3, 2010

Evidence A No. 3-3: Fact experiment authentic document, 2017 No. 156 (created by a notary, Koki SUGIGAKI)

Evidence A No. 3-4:Linear cylinder catalog, KOSMEK LTD., created in May,2010, copy of cover, p. 5-p. 6, p. 23-p. 24, p. 27-p. 28, p. 45-p. 46, and back cover

Evidence A No. 4: Sensing Link Clamp, link clamp, double-acting 7MPa, model CLM catalog, Pascal Engineering Corporation, output on March 28, 2018, copy of p. 137-p. 174

Evidence A No. 5-1: Written amendment submitted on October 23, 2015 of the

Original application

Evidence A No. 5-2:	Notice of reasons for refusal dated November 20, 2015 of
the Original application	
Evidence A No. 5-3:	Written opinion submitted on December 24, 2015 of the
Original application	
Evidence A No. 5-4:	Examiner's decision of refusal dated January 7, 2016 of the
Original application	
Evidence A No. 6:	Written amendment submitted on May 10, 2016 of the
Application	

(2) Demandee's means of proof

The demandee submitted Evidences B No. 1 to No. 4, as means of proof, together with a written reply.

Evidence B No. 1: Japanese Unexamined Patent Application Publication No. 2001-87991 Evidence B No. 2: Japanese Unexamined Patent Application Publication No. 2003-305626

Evidence B No. 3: Japanese Unexamined Patent Application Publication No. 2009-125821

Evidence B No. 4: Written opinion submitted on October 5, 2017 of the Application

No. 4 Allegations of the parties

1. Regarding Reason for invalidation 1

[Demandant]

(1) The Originally attached Specification, etc. (Evidence A No. 1-1 to No. 1-3) discloses a configuration that includes a fluid pressure introduction chamber (hydraulic pressure introduction chamber) and holds a valve body advanced toward the output member with a fluid pressure (Originally attached Specification, etc. [Claim 1], or the like). Example 2 discloses, as a configuration that holds a valve body advanced toward the output member, an elastic member exemplified by a spring (Originally attached Specification, etc. [Claim 7], [0074], [0075], [FIG. 11], [FIG. 12]) that requires a technical matter using a fluid pressure, and only describes the elastic member as playing an auxiliary role.

The effects of Example 2 are the same as effects ("advantageous in reliability and durability" described in the Originally attached Specification, etc. [0072]) of Example 1 which assumes holding a valve body advanced with a fluid pressure (example of the invention according to Claim 1 of the Originally attached Specification, etc.). Therefore, as effects of Example 2, there is the description "the same effects as those of the hydraulic

cylinder of Example 1 can be obtained" (the final sentence in the Originally attached Specification, etc. [0075]).

Furthermore, not only in the Examples 1 and 2 but also in the Example 3 to Example 8, all examples require hydraulic pressure for holding a valve body in an advanced state, and do not describe or indicate a configuration which does not use hydraulic pressure.

As seen above, in the Originally attached Specification, etc., even when an elastic member is used to perform an auxiliary function, a configuration using fluid pressure in a fluid chamber is required as a configuration for holding a valve body advanced toward the output member.

Thus, the Originally attached Specification, etc. describes that an auxiliary elastic member (spring) is added to a configuration that assumes fluid pressure (hydraulic pressure) for holding a valve body in an advanced state, but does not describe or indicate a technical matter that holds a valve body advanced toward the output member only by the elastic member (spring). (Written demand p. 9 l. 2-p. 10 l.2)



図A [弁体に作用する力と時間との関係を示す模式図]

弁体に作用するカ	
上向きの力	
上向きの差力	
下向きの力	

(2)

Force to be applied to a valve body Upward force Upward difference in force Downward force

時間 Time

図A [弁体に作用する力と時間との関係を示す模式図] FIG. A [Schematic diagram of relationship between force to be applied to a valve body and time]

As shown in the above figure, pressure in an unclamping hydraulic chamber 15 and a hydraulic pressure introduction chamber 53 increases with time, and the valve body 51 can be held in an advanced state when a great downward force (Fa) is applied to the valve body 51, by means of an upward force (Fb) larger than the force (Fa).

Accordingly, when the hydraulic pressure introduction chamber 53 (and hydraulic pressure introduction passage 54) shown in the figure left below is eliminated (see the figure right below), the upward force (Fb) does not exist. In this case, when the pressure in the hydraulic chamber 15 increases, the valve body 51 is pressed down by a great downward force (Fa) and an advanced state cannot be held.

Thus, a person skilled in the art cannot derive the technical matter, "the valve body 51 can be held in an advanced state only with a biasing force (indicated by blue color in the figure) of the elastic member (spring 53a)", even when the pressure in the hydraulic chamber 15 reaches the set filling pressure (e.g., 7MPa) or a high-pressure region around the filling pressure, from the Originally attached Specification, etc. (Written demand p. 11 1.14-p. 12 1. 12)



開閉委弁機構 Opening or closing valve mechanism [図11に請求人が追記] [added to FIG. 11 by the demandant] (3) Judgment by the Intellectual Property High Court of Japan August 24, 2016, 2015(Gyo-Ke) 10245 includes the following description:

"An obvious matter is a matter that the means thereof must be acknowledged as being substantially described in the Specification, and presence of other possible means is not enough. As described above, the Originally attached Specification, etc. does not describe or indicate means other than the toilet seat elevation device, and there is no basis on which other means is obvious for a person skilled in the art to derive unambiguously. However, in light of the above interpretation of obvious matter, it is obvious that other publicly known art is not substantially described in the Specification even if the other publicly known art exists."

Accordingly, it cannot be said that other means or other publicly known art are described even if they exist.

Judgment by the Intellectual Property High Court of Japan December 20, 2006, 2005 (Gyo-Ke) 10832 includes the following description:

"Thus, for defining that a certain matter is obvious from the description of the Specification or Drawings, it should be understood that a person skilled in the art can easily understand and recognize the matter, based on a well-known art, from the description of the Specification or Drawings, and that a motivation (indication) is required to understand the description of the Specification or Drawings in association even with well-known arts."

Accordingly, a motivation (indication) is required to understand the description of the Originally attached Specification, etc. in association even with well-known arts. (Demandant's brief p. 4 l. 8-p. 5 l.1)

(4) According to the description of the Example 2 in the Originally attached Specification, etc., it is not obvious for a person skilled in the art that the valve main body 58A can be held in a state advanced to the unclamping hydraulic chamber 15 only by the compressed coil spring 53. In addition, even if common general technical knowledge and well-known arts are considered, the description of Example 2 in the Originally attached Specification, etc. is understood as indispensably using fluid pressure in the fluid chamber for holding the valve body in an advanced state. (Demandant's brief p. 51. 10-1. 15)

(5) Even if a configuration of advancing a valve body only by an "elastic member" without a "fluid pressure introduction chamber" is a matter of common general technical

knowledge, whether the common general technical knowledge is described in the Originally attached Specification, etc. is a different matter.

Thus, as described in the judgments cited above, even if the matter is publicly known, it cannot be said that the matter is described in the Originally attached Specification, etc., and a motivation (indication) is required to understand the matter in association even with common general technical knowledge.

However, there is no motivation (indication) in the Originally attached Specification, etc. (Demandant's brief p. 61. 23-p. 71.4)

(6) A person skilled in the art can only understand that fluid pressure in a fluid chamber (and a fluid pressure introduction chamber) is required for holding a valve body in an advanced state, and cannot understand that a technical matter of holding the valve body in an advanced state without using fluid pressure is described.

Thus, the "elastic member single structure" is to introduce a new technical matter in a relationship with a technical matter to be derived by integrating all descriptions in the Originally attached Specification, etc.

Therefore, Inventions 1 to 5 were registered in violation of the provisions of Article 17-2(3). (Demandant's brief p. 81. 10-1. 17)

(7) Even if the allegation, "Upward biasing force to bias the valve main body 58A can be increased by increasing a compression degree of the mounted compressed coil spring 53a as necessary. The upward biasing force can be increased also by increasing a spring constant of the compressed coil spring 53a" (p. 13 l. 10-l. 13) is technically correct, the Originally attached Specification, etc. includes no description that derives the allegation.

In addition, since an elastic member is inevitably enlarged when a biasing force of a compressed coil spring, there is a discrepancy with the effect described in the Originally attached Specification, etc. that "the fluid pressure cylinder can be made compact" ([0022]). Therefore, a person skilled in the art never recognizes that the Invention includes advancing a valve body only by an elastic member with increasing a biasing force of a compressed coil spring. (Demandant's brief p.9 1.14-1. 25)

[Demandee]

(1) The demandant alleges that the "fluid pressure introduction chamber" is essential by favorably interpreting the description of the "Example 2", which is only one example of the Invention (p. 9-p. 22).

In a judgment of requirements prescribed in Article 17-2(3) of the Patent Act, it is

necessary to judge whether the amended matter falls under "a technical matter to be derived by integrating all descriptions in the Originally attached Specification, etc. by a person skilled in the art" (Judgment by the Intellectual Property High Court of Japan May 30, 2008 (2006 (Gyo-Ke) 10563 court decision of council). However, the demandant alleges only analysis of the contents described in "Example 2", and overlooks the description in [0122], "the structure of the opening or closing mechanism is an example, and the structure is not limited to the opening or closing mechanism"; after all, the allegation is not based on a judgment made by integrating all descriptions in the Originally attached Specification, etc. Thus, the allegation is unreasonable. (Written opinion p. 5 1. 6-1. 16)

(2) It is obvious for a person skilled in the art that the "compressed coil spring 53a" presented in Example 2 can bias the valve main body 58A alone to be advanced toward the unclamping hydraulic chamber. The configuration of advancing a valve body only by an "elastic member" without a "fluid pressure introduction chamber" is a matter of common general technical knowledge. The Originally attached Specification, etc. includes, in [0122], the description, "various types of opening or closing mechanisms can be employed", and modification to an "opening or closing mechanism" having no "fluid pressure introduction chamber" can be predicted naturally. Thus, the "elastic member which elastically biases the large-diameter shaft part of the valve body toward the fluid chamber to hold the valve body advanced toward the fluid chamber" falls under a "technical matter to be derived by integrating all descriptions in the Originally attached Specification, etc. of the case". (Written opinion p. 11 l. 12-l. 20)

(3) The "small-diameter shaft part 58a" described in the Originally attached Specification, etc. is required, as the name itself suggests, to have a "small diameter" to the extent possible. However, when no hydraulic pressure introduction chamber 53 is arranged, the hydraulic pressure introduction passage 54 is not required in the valve main body 58A, thereby simplifying the structure of the valve main body 58A and reducing the diameter of the small-diameter shaft part 58a. As a result, the cross sectional area of the small-diameter shaft part 58a can be reduced and a downward force (Fa) due to a pressure in the unclamping hydraulic chamber 15 can be reduced.

Similarly, as for the "compressed coil spring 53a" as an "elastic member" described in the Originally attached Specification, etc., as the name itself suggests, an upward force (Fb) is generated by compressed mounting. An upward biasing force to bias the valve main body 58A can be increased by increasing a compression degree of the

mounted compressed coil spring 53a as necessary. The upward biasing force can be increased also by increasing a spring constant of the compressed coil spring 53a.

As such, an upward biasing force due to an elastic member is made larger than a downward force due to hydraulic pressure by reducing the diameter of the "small-diameter shaft part 58a" or increasing a compression degree or a spring constant of the "compressed coil spring 53a", to "hold the valve body advanced toward the fluid chamber" only by a biasing force of the "elastic member" (Constituent component 1C). Reduction of the diameter of the "small-diameter shaft part 58a" or increase of a compression degree or a spring constant of the "compressed coil spring 53a" is only within a scope naturally predicted as "various kinds of opening or closing valve mechanisms" in [0122]. Thus, it is natural that the idea of "holding the valve body advanced toward the fluid chamber" only by a biasing force of the "elastic member" is also within a scope of matters described in the Originally attached Specification, etc. of the Patent. (Written opinion p. 13 1. 2-1. 23)

(4) The demandee does not describe that the amendment falls within the scope of matters described in the Originally attached Specification simply because the "elastic member single structure" is a well-known prior art. We should not overlook the fact that the description of Example 2 of the Patent clearly indicates not only an example of circled 3 (Note by the body: 3 in a circle, the same applies hereinafter.) (combination of "hydraulic pressure" and "resilience") simply, but also modification from circled 1 (only "hydraulic pressure") to circled 3 (combination of "hydraulic pressure" and "resilience"), or modifying "an element for biasing a valve body". A person skilled in the art very naturally employs, in modifying an opening or closing valve mechanism based on the description in [0122], "resilience" alone, or the "elastic member single structure", when "hydraulic pressure" and "resilience" are presented as examples of "an element for biasing a valve body", and when employing an element "hydraulic pressure" alone (Example 1, or the like) and employing "hydraulic pressure" and "resilience" and "resilience" in combination (Example 2, are presented.

Thus, it should be said that the "elastic member single structure" is a matter which is recognized by a person skilled in the art to be substantially described in the Originally attached Specification, etc. of the Patent. (Demandee's brief p. 4 l. 18-p. 5 l. 4)

(5) As described above, the demandee does not argue that the "elastic member single structure" is a matter within a scope of matters described in the Originally attached Specification only based on the description of Example 2 and the description in [0122].

As described above, in view of the description in Example 1, or the like in the Originally attached Specification, the "elastic member single structure" is considered by a person skilled in the art as a matter substantially described. Thus, the "elastic member single structure" is a matter to be derived by integrating all descriptions in the Originally attached Specification of the case, and falls within the scope described in the Originally attached Specification. (Demandee's brief p. 5 1. 16-1. 22)

2. Regarding Reason for invalidation 2

[Demandant]

(1) The Originally attached Specification, etc. (Evidences A No. 1-1 to No. 1-3) does not describe a configuration of holding a valve body in an advanced state without using fluid pressure. The Specification and Drawings after the amendment according to Invention 1 (herein after referred to as "the Specification, etc.") also disclose the same contents as the Originally attached Specification, etc., and do not describe a configuration of holding a valve body in an advanced state without using fluid pressure.

As described above, the Originally attached Specification, etc. does not describe or indicate a configuration of biasing an outer circumference of a large-diameter shaft part of a valve body with an elastic member to hold it in an advanced state. The Specification, etc. also does not describe or indicate a configuration of biasing an outer circumference of a large-diameter shaft part. The Specification, etc. only discloses a configuration of biasing a small-diameter concave hole 58d formed in a lower part of the valve main body 58A.

Thus, Invention 1 which does not require fluid pressure (not essential) in holding a valve body in an advanced state is not described in the Detailed Description of the Invention in the Specification, etc., and Invention 1 does not satisfy requirements for support. (Written demand p. 26 l. 14-p. 27 l. 3)

(2) Since the Originally attached Specification clearly describes effects of the invention in [0021] and [0022] and clearly describes that "reliability and durability" is an essential problem and object of the invention, the demandee's allegation is groundless. (Demandant's brief p. 11 l. 5-l. 7)

(3) As described in [0021], in reducing the size of the fluid pressure cylinder, the configuration that "the opening or closing valve mechanism includes a valve body, a valve seat, a fluid pressure introduction chamber, and a fluid pressure introduction passage" is essential.

Therefore, even if, as alleged by the demandee, "improvement in reliability and durability" and "size reduction" are different problems and it is only necessary to solve one of the problems, the configuration of using fluid pressure in the fluid chamber for holding a valve body in an advanced state is essential for solving both problems ([0021] [0022]). Thus, the demandee's allegation is groundless. (Demandant's brief p. 11 l. 21-l. 28)

[Demandee]

(1) The Specification ([0011], or the like) originally attached to the application of the Patent includes the following independent two problems or objects in parallel:

 \cdot "to provide a fluid pressure cylinder which can be made compact and can reliably detect that an output member has reached a predetermined position via the change in air pressure of an air passage in a cylinder body, and a clamp device"; and

 \cdot "to provide a fluid pressure cylinder configured to improve reliability in detecting a predetermined position of an output member and durability, and a clamp device". It is only necessary to achieve one of the above problems. Thus, it cannot necessarily be said that "securing reliability and durability" is an essential problem or object.

Even if "improvement in reliability or durability" is an essential problem or object, the Invention, which does not include a "fluid pressure introduction chamber", is not contrary to the object.

Therefore, the demandant's allegation that the Invention having no "fluid pressure introduction chamber" does not achieve the object of the invention described in the Specification originally attached to the application is absolutely groundless. (Written reply p. 5 l. 22-p. 6 l. 7)

(2) The Invention "is configured to embed an opening or closing valve mechanism in a cylinder body by embedding a valve body in a mounting hole formed in the cylinder body, thereby making a fluid pressure cylinder compact" and "can reliably detect a predetermined position of an output member via air pressure in an air passage, since a valve body is moved by the output member to reliably switch the opened/closed state of the opening or closing valve mechanism when the output member reaches the predetermined position". The object "to provide a compact fluid pressure cylinder which can reliably detect that an output member has reached a predetermined position via the change in air pressure of an air passage in a cylinder body, and a clamp device", which is at least one of the objects described in the Originally attached Specification, etc., is achieved. Thus, the Invention does not exceed a scope described in the Originally

attached Specification. (Written reply p. 16 l. 12-l. 20)

(3) According to the Invention, as described above, moving distance of the "valve body" can be reduced, thereby suppressing wear of a sliding part of the "valve body" and preventing reduction in performance for closing an air passage after a long period of use, as compared with a structure described in Patent Document 2 (Evidence B No. 2). Thus, the Invention solves the problem described in [0009], "reduction in performance for closing an air passage", even without a "fluid pressure introduction chamber", and is not contrary to the object to "improve reliability or durability" ([0011]). (Written reply p. 17 1. 10-1. 16)

No. 5 Judgment by the body

1. Regarding the invention described in the Originally attached Specification, etc.

The Originally attached Specification, etc. includes the following descriptions (The underlines were added by the body, the same applies hereinafter.).

(1) Scope of Claims

"[Claim 1]

A fluid pressure cylinder comprising a cylinder body, an output member equipped to move forward or rearward with respect to the cylinder body, and a fluid chamber for driving the output member in at least one of forward and rearward directions,

the fluid pressure cylinder including an air passage formed in the cylinder body in which compressed air is supplied to one end and the other end is communicated with the surroundings, and an opening or closing valve mechanism capable of opening or closing the air passages, wherein

the opening or closing valve mechanism comprises a valve body mounted to move forward or rearward with respect to a mounting hole formed in the cylinder body and having a tip protruding into the fluid chamber, a valve seat to be brought into contact with the valve body, <u>a fluid pressure introduction chamber which holds the valve body</u> <u>advanced toward the output member with fluid pressure in the fluid chamber, and a fluid</u> <u>pressure introduction passage allowing the fluid chamber to communicate with the fluid</u> <u>pressure introduction chamber</u>,

when the output member reaches a predetermined position, the valve body is moved by the output member to switch the opened/closed state of the opening or closing valve mechanism, and it can be detected that the output member reaches the predetermined position through air pressure in the air passage. [Claim 2] The fluid pressure cylinder described in Claim 1, wherein

if fluid pressure has been supplied to the fluid chamber, the opening or closing valve mechanism maintains an opened state in which the valve body is separated from the valve seat,

when the fluid pressure in the fluid chamber is switched to drain pressure and the output member reaches the predetermined position, the opening or closing valve mechanism selects a closed state in which the valve body is in contact with the valve seat. [Claim 3]

The fluid pressure cylinder described in Claim 1, wherein

when fluid pressure is supplied to the fluid chamber, the opening or closing valve mechanism maintains the closed state in which the valve body is in contact with the valve seat,

when the fluid pressure in the fluid chamber is switched to drain pressure and the output member reaches the predetermined position, the opening or closing valve mechanism selects the opened state in which the valve body is separated from the valve seat.

[Claim 4]

The fluid pressure cylinder described in Claim 2, wherein

the opening or closing valve mechanism includes a cap member to be threaded into the mounting hole formed in the cylinder body and allowing the valve body to be movably inserted therein, and

the valve seat is formed at an output member-side end of the cap member, and <u>the</u> fluid pressure introduction chamber is formed between the cap member and the valve <u>body</u>.

[Claim 5]

The fluid pressure cylinder described in Claim 4, wherein

the valve body includes a valve main body, and a movable valve body externally mounted on the valve main body and moved close to/away from the valve seat, and a seal member is arranged between the valve main body and the movable valve body.

[Claim 6]

The fluid pressure cylinder described in Claim 1, wherein

the fluid pressure introduction passage of the opening or closing valve mechanism is formed to penetrate through the valve body.

[Claim 7]

The fluid pressure cylinder described in Claim 1, wherein the opening or closing valve mechanism includes an elastic member to elastically bias the valve body toward the output member.

[Claim 8]

The fluid pressure cylinder described in Claim 1, wherein

the predetermined position is one of a rising limit, an operation halfway point, and a lowering limit of the output member.

[Claim 9]

A clamp device including a clamp rod formed of the output member and configured to drive the clamp rod by the fluid pressure cylinder described in Claim 8."

(2) Specification

A. Paragraphs 0021 to 0023

"The fluid pressure cylinder in Claim 1 includes an opening or closing valve mechanism for opening or closing an air passage in a cylinder body. <u>The opening or closing valve</u> <u>mechanism includes a valve body, a valve seat, a fluid pressure introduction chamber,</u> and a fluid pressure introduction passage. The opening or closing valve mechanism can be embedded in the cylinder body by embedding the valve body in a mounting hole formed in the cylinder body, thereby making the fluid pressure cylinder compact.

Fluid pressure in the fluid chamber of the fluid pressure cylinder is to be introduced into the fluid pressure introduction chamber of the opening or closing valve mechanism via the fluid pressure introduction passage. When an output member has not reached a predetermined position, the valve body can be held to protrude toward the fluid chamber by using the fluid pressure in the fluid chamber, and the opened/closed state of the opening or closing valve mechanism can be held. It is advantageous in both reliability and durability, since the valve body is biased by using fluid pressure in the fluid chamber.

When the output member reaches the predetermined position, the output member moves the valve body to reliably switch opened/closed state of the opening or closing valve mechanism, thereby reliably detecting the predetermined position of the output member via air pressure in the air passage."

B. Paragraph 0028

"In the fluid pressure cylinder in Claim 6, <u>there is no need to form a fluid pressure</u> introduction passage in the cylinder body, thereby making the opening or closing valve mechanism compact."

C. Paragraph 0048 (Example 1)

"Next, the first opening or closing valve mechanism 30 is described below.

As shown in FIG. 2, FIG. 7 and FIG. 9, the first opening or closing valve

mechanism 30 is arranged in a wall part of an upper end wall member 12 near an outer periphery of an upper end of a first through hole 12b, to open or close a downstream end of an upstream air passage 21a of the first air passage 21. <u>The first opening or closing valve mechanism 30 includes</u> a valve body 31, a cap member 32, a valve seat 32a, <u>a hydraulic pressure introduction chamber 33 (fluid pressure introduction chamber), a hydraulic pressure introduction passage 34 (fluid pressure introduction passage), and inside air passages 35a-35f, and the valve mechanism is <u>embedded in the mounting hole 36 of the upper end wall member 12 via the cap member 32 and an annular member 37.</u>" D. Paragraphs 0057 to 0058 (Example 1)</u>

"The hydraulic pressure introduction chamber 33 is formed between the cap member 32 of the concave hole 32b and the valve main body 38, and is connected to a cylindrical part 14a of a clamping hydraulic chamber 14 via the hydraulic pressure introduction passage 34 formed to penetrate through the valve main body 38. A plurality of branch hydraulic passages 34a are formed at a tip of the hydraulic pressure introduction passage 34. When hydraulic pressure is supplied to the clamping hydraulic chamber 14, hydraulic pressure is introduced from the hydraulic pressure introduction passage 34 to the hydraulic pressure introduction chamber 33, and the hydraulic pressure biases the valve main body 38 in an advance direction (toward a piston rod part 4c).

Next, operations of the hydraulic pressure cylinder 3 and the first opening or closing valve mechanism 30 are described below.

When hydraulic pressure is supplied to the clamping hydraulic chamber 14 and the piston rod member 4a is being lowered or located in a lowering limit (clamp state), a small-diameter rod part 4d faces the first opening or closing valve mechanism 30. In the first opening or closing valve mechanism 30, as shown in FIG. 9, the valve body 31 receives hydraulic pressure introduced into the hydraulic pressure introduction chamber 33 to advance the valve main body 38, a valve surface 39v is separated from the valve seat 32a to switch from the closed state to the opened state, and the air passages 35a-35f communicate with each other. In this state, an annular engagement part 39c is pushed to the back by a step part of an engagement shaft part 38c, thereby reliably switching from the closed state to the opened state'."

E. Paragraph 0069 (Example 1)

"Operations of the hydraulic cylinder 3 and a second opening or closing valve mechanism 50 are described below.

When the clamp device 1 shown in FIG. 1 and FIG. 3 is in an unclamping state, the unclamping hydraulic chamber 15 is filled with hydraulic pressure. <u>Hydraulic</u>

pressure is introduced from a hydraulic pressure introduction hole 54 to the hydraulic pressure introduction chamber 53, to move the valve body 51 upward with the hydraulic pressure in the hydraulic pressure introduction chamber 53, and the movable valve body 59 is also moved upward through engagement between the annular engagement part 59c and the step part of the small-diameter shaft part 58c. An annular valve surface 59v is separated from the annular valve seat 52a to hold the opened state."

F. Paragraph 0071 (Example 1)

"In the hydraulic cylinder 1, the first and second opening or closing valve mechanisms 30, 50 can be embedded in the clamp body 10 by embedding the first and second opening or closing valve mechanisms 30, 50 for opening or closing the air passages 21, 22 in the mounting holes 36, 56 formed in the cylinder body 10, thereby making compact the hydraulic cylinder 1, which can detect a rising limit and a lowering limit of the output member 4."

G. Paragraph 0072 (Example 1)

"In the first opening or closing valve mechanism 30, hydraulic pressure in the clamping hydraulic chamber 14 is introduced to the hydraulic pressure introduction chamber 33, the hydraulic pressure is applied to the valve body 31, and the valve body 31 can be held to protrude toward the output member 4, which is advantageous in reliability and durability. The same applies to the second opening or closing valve mechanism." H. Paragraphs 0074 and 0074 (Example 2)

"A second opening or closing valve mechanism 50A is described below, which is formed by partially modifying the second opening or closing valve mechanism 50 in Example 1. Only the modified part is explained. The same symbols are appended to similar members for omitting explanation. <u>As shown in FIG. 11 and FIG. 12, a concave hole 58d having an open bottom and opened toward the hydraulic introduction chamber 53 is formed at a lower end of the valve main body 58A, and a compressed coil spring 53a is mounted on the concave hole 58d and the hydraulic pressure introduction chamber 53. The valve main body 58A is biased upward by hydraulic pressure in the hydraulic pressure introduction chamber 53, and biased upward by the compressed coil spring 53a.</u>

<u>The compressed coil spring 53a can increase operation reliability of the valve body</u> 51, in switching from the clamping state to the unclamping state, during a transient period before hydraulic pressure filled in the unclamping hydraulic chamber 15 rises. As with the case above, the compressed coil spring may be embedded also in the first opening or closing valve mechanism 30. Also, the same effects of the hydraulic cylinder in the Example 1 can be obtained."

I. Paragraph 0078 (Example 3)

"In the unclamping state shown in FIG. 13, hydraulic pressure is supplied to the unclamping hydraulic chamber 15, and the valve main body 58 and the movable valve body 59B are moved upward to the rising limit by hydraulic pressure introduced to the hydraulic pressure introduction chamber 53. The annular valve surface 59v is separated from the annular valve seat 52a, resulting in the opened state."

J. Paragraph 0083 (Example 4)

"As shown in FIG. 15, in the unclamping state, hydraulic pressure in the unclamping hydraulic chamber 15 is introduced to the hydraulic pressure introduction chamber 53. In the same way as with the second opening or closing valve mechanism 50B, the annular valve surface 59v is separated from the annular valve seat 52a, resulting in the opened state. In the clamping state, in the same way as with the second opening or closing valve mechanism 50B, the annular valve surface 59v is brought into contact with the annular valve seat 52a, resulting in the closed state. Since the demand for accuracy of parts is moderated in the second opening or closing valve mechanism 50C, it is advantageous for manufacturing. Also, the same effects of the hydraulic cylinder in Example 1 can be obtained."

K. Paragraph 0085 (Example 5)

"The first opening or closing valve mechanism 30 enters the closed state when the output member 4 is located in the rising limit, and enters the opened state when the output member 4 is located in the lowering limit. However, the first opening or closing valve mechanism 30D enters the opened state when the output member 4 is located in the rising limit, and enters the closed state when the output member 4 is located in the lowering limit. As shown in FIG. 17 to FIG. 24, the first opening or closing valve mechanism 30D includes a cap member 32, an annular member 37D, a valve body 31D, a hydraulic pressure introduction chamber 33, a hydraulic pressure introduction passage 34, and inside air passages 35a, 35b, 35g, and 35h, and is mounted on a horizontal mounting hole 36 formed on a upper end wall member 12. The valve body 31D is formed only in the valve main body 38. The valve main body 38 is formed by integrating a small-diameter shaft part 38a and a large-diameter shaft part 38b."

L. Paragraph 0092 (Example 5)

"As shown in FIG. 19, when the clamp device 1D is in the unclamping state, and the piston rod member 4a is not located in the lowering limit with the unclamping hydraulic chamber 15 supplied with hydraulic pressure, hydraulic pressure is introduced from the hydraulic introduction passage 54 to the hydraulic pressure introduction chamber 53 to slightly move the valve main body 58 upward. The annular valve surface 58c is brought into contact with the annular valve seat 57b, resulting in the closed state. Accordingly,

since air pressure in the second air passage 22 increases, a pressure switch 22n can detect that the output member 4 has risen from the lowering limit."

M. Paragraph 0099 (Example 6)

"In the unclamping state where hydraulic pressure is supplied to the unclamping hydraulic chamber 75 and hydraulic pressure is eliminated from the clamping hydraulic chamber 74, as shown in FIG. 26, hydraulic pressure is introduced from the hydraulic pressure introduction passage 83 to the hydraulic pressure introduction chamber 82, the valve body 80 receiving the hydraulic pressure moves downward, and the annular valve surface 80v is brought into contact with the annular valve seat 81a, resulting in the closed state. Accordingly, air pressure in the air passage 85a increases, and a pressure switch or a pressure sensor can detect lowering from the rising limit."

N. Paragraphs 0105 and 0106 (Example 7)

"In the clamp device 1F, an opening or closing valve mechanism 50F is arranged for detecting that a piston rod member 90 has completed twisting operation when the piston rod member 90 enters the clamping state from the unclamping state (the piston rod member 90 moves downward).

The opening or closing valve mechanism 50F has almost the same structure as the second opening or closing valve mechanism 50 in Example 1. The same symbols are appended to similar members for simple explanation."

O. Paragraph 0113 (Example 8)

"The opening or closing valve mechanism 30G is similar to the first opening or closing valve mechanism 30D in Example 5. The same symbols are appended to similar members for simple explanation. The opening or closing valve mechanism 50F in Example 7 enters the opened state when the output member 4 is in twisting operation, and enters the closed state after the output member 4F completes the twisting operation. However, the opening or closing valve mechanism 30G enters the closed state when the output member 4F completes the twisting operation. However, the opening or closing valve mechanism 30G enters the closed state when the output member 4F is in twisting operation. However, the opening or closing valve mechanism 30G enters the closed state when the output member 4F is in twisting operation, and enters the opened state after the output member 4F completes the twisting operation.

P. Paragraph 0122

"The structures of the above various types of opening or closing valve mechanisms are also examples. Not only these opening or closing valve mechanisms but also various other types of opening or closing valve mechanism can be employed within a range not deviating from the intent of the present invention."

(3) Drawings

FIGS. 2, 3, 7, 9 and 16, 18, 19, 21, 23, 24, 26, 27, 30, 32, 34, and 36 illustrating

the embodiments of the invention relating to the Application are acknowledged as clearly showing that an opening or closing valve mechanism includes a hydraulic pressure introduction chamber and a hydraulic pressure introduction passage.

2. Regarding the Amendment

The Amendment is to amend the Scope of Claims of the Originally attached Specification, etc. (see "(1) Scope of Claims" in "1. Regarding the invention described in the Originally attached Specification, etc.") as follows (Underlined portions indicate amended portions.).

"[Claim 1]

<u>A fluid pressure cylinder</u> comprising:

a cylinder body;

an output member equipped to move forward or rearward with respect to the cylinder body;

a fluid chamber for driving <u>the</u> output member in at least one of forward and rearward directions;

an air passage formed in the cylinder body in which compressed air is supplied to one end and the other end is communicated with the surroundings; and

an opening or closing valve mechanism capable of opening or closing the air passages, wherein

the opening or closing valve mechanism comprises:

a valve body mounted to move forward or rearward in a mounting hole formed in the cylinder body and <u>including a valve main body integrated with a small-diameter shaft</u> <u>part and a large-diameter shaft part arranged opposite</u> the fluid chamber <u>with respect to</u> <u>the small-diameter shaft part</u>;

an elastic member which elastically biases the large-diameter shaft part of the valve body toward the fluid chamber to hold the valve body advanced toward the fluid chamber;

an annular member arranged in the middle part of the mounting hole of the cylinder body and having a through hole through which the small-diameter shaft part of the valve main body passes;

a cap member fixed in an open-side of the mounting hole and having a recess into which the large-diameter shaft part of the valve main body is inserted;

<u>a housing chamber formed between the annular member and the cap member to</u> <u>house the valve body:</u>

a first air passage formed to extend in a radial direction of the annular member to

allow the housing chamber to communicate with the one end of the air passage; and

<u>a second air passage formed in the cap member to allow the housing chamber to</u> <u>communicate with the other end of the air passage</u>, wherein

when the output member is not located in a predetermined position, the opening or closing valve mechanism holds the valve body advanced toward the fluid chamber and maintains an opened state to open the first air passage and the second air passage,

when the output member reaches the predetermined position, the valve body is moved by the output member to change the opened/closed state of the opening or closing valve mechanism to a closed state to close the first air passage and the second air passage, and it can be detected that the output member reaches the predetermined position through air pressure in the air passage.

[Claim 2]

The fluid pressure cylinder described in Claim 1, wherein

the opening or closing valve mechanism further includes a valve seat which can be brought into contact with the valve body,

the valve body includes a movable valve body externally mounted on the valve main body and moved close to or apart from the valve seat.

[Claim 3]

The fluid pressure cylinder described in Claim 1 or Claim 2 further comprising:

<u>a first seal member arranged on the outer periphery of the small-diameter shaft</u> part to seal between the fluid chamber and the housing chamber; and

a second seal member to seal between the inside and the surroundings of the mounting hole closed by the cap member.

[Claim 4]

The fluid pressure cylinder described in <u>one of Claim 1 to Claim 3</u>, wherein the predetermined position is one of a rising limit, an operation halfway point, and a lowering limit of the output member.

[Claim 5]

A clamp device including a clamp rod formed of the output member and configured to drive the clamp rod by the fluid pressure cylinder described in <u>Claim 4</u>."

Thus, the Amendment includes the following (1) to (8).

(1) The description in Claim 1 before the amendment, "a valve body mounted to move forward or rearward with respect to a mounting hole formed in the cylinder body and having a tip protruding into the fluid chamber", is modified to the description, "a valve body mounted to move forward or rearward in a mounting hole formed in the cylinder body and including a valve main body integrated with a small-diameter shaft part and a large-diameter shaft part arranged opposite the fluid chamber with respect to the small-diameter shaft part".

(2) The matter specifying the invention, "a valve seat to be brought into contact with the valve body, a fluid pressure introduction chamber which holds the valve body advanced toward the output member with fluid pressure in the fluid chamber, and a fluid pressure introduction passage allowing the fluid chamber to communicate with the fluid pressure introduction chamber" is deleted from Claim 1 before the amendment, and the following new matter specifying the invention is introduced, "comprises an elastic member which elastically biases the large-diameter shaft part of the valve body toward the fluid chamber to hold the valve body advanced toward the fluid chamber; an annular member arranged in the middle part of the mounting hole of the cylinder body and having a through hole through which the small-diameter shaft part of the valve main body passes; a cap member fixed in an open-side of the mounting hole and having a recess into which the largediameter shaft part of the valve main body is inserted; a housing chamber formed between the annular member and the cap member to house the valve body; a first air passage formed to extend in a radial direction of the annular member to allow the housing chamber to communicate with the one end of the air passage; and a second air passage formed in the cap member to allow the housing chamber to communicate with the other end of the air passage, wherein when the output member is not located in a predetermined position, the opening or closing valve mechanism holds the valve body advanced toward the fluid chamber and maintains the opened state to open the first air passage and the second air passage".

(3) The description in Claim 1 before the amendment, "when the output member reaches a predetermined position, the valve body is moved by the output member to switch the opened/closed state of the opening or closing valve mechanism, and it can be detected that the output member reaches the predetermined position through air pressure in the air passage", is modified to the description, "when the output member reaches the predetermined position, the valve body is moved by the output member to change the opened/closed state of the opening or closing valve mechanism to the closed state to close the first air passage and the second air passage, and it can be detected that the output member reaches the predetermined position through air pressure in the air passage".

(4) Claims 2 to 7 before the amendment are deleted.

(5) As Claim 2,

the following new matter is introduced:

"The fluid pressure cylinder described in Claim 1, wherein

the opening or closing valve mechanism further includes a valve seat which can be brought into contact with the valve body,

the valve body includes a movable valve body externally mounted on the valve main body and moved close to or apart from the valve seat".

(6) As Claim 3,

the following new matter is introduced:

"The fluid pressure cylinder described in Claim 1 or Claim 2, further comprising:

a first seal member arranged on the outer periphery of the small-diameter shaft part to seal between the fluid chamber and the housing chamber; and

a second seal member to seal between the inside and the surroundings of the mounting hole closed by the cap member".

(7) Claim 8 before the amendment is used as Claim 4 after the amendment, depending from any one of Claims 1 to 3 after the amendment.

(8) Claim 9 before the amendment is used as Claim 5 after the amendment, depending from Claim 4 after the amendment.

3. Examination on Reasons for invalidation 1 and 2

(1) Reason for invalidation 1

As indicated in "1. Regarding the invention described in the Originally attached Specification, etc.", the Scope of Claims of the Originally attached Specification, etc. clearly describes that the opening or closing valve mechanism includes a fluid pressure introduction chamber and a fluid pressure introduction passage, and does not describe that the opening or closing valve mechanism is configured to advance a valve body only by an elastic member without a fluid pressure introduction chamber or a fluid pressure introduction passage.

In light of the descriptions of C to G and I to O in the Originally attached Specification, etc., <u>Examples 1 and 3 to 8</u> described in the Originally attached Specification, etc. <u>include an opening or closing valve mechanism comprising a fluid</u> pressure introduction chamber for holding a valve body advanced toward the output

member with fluid pressure in a fluid chamber, and a fluid pressure introduction passage allowing the fluid chamber and the fluid pressure introduction chamber to communicate with each other.

In light of the description of H in the Originally attached Specification, etc., <u>Example 2</u> described in the Originally attached Specification, etc. <u>includes a</u> configuration of biasing the valve main body 58A upward with resilience of the compressed coil spring 53a together with hydraulic pressure in the hydraulic pressure introduction chamber 53, in order to increase operation reliability of the valve body 51 during a transient period before hydraulic pressure filled in the unclamping hydraulic chamber 15 rises. To the contrary, the example cannot be acknowledged as biasing the valve main body upward, also not in the transient period, only with resilience of the compressed coil spring without using hydraulic pressure.

The description of P in the Originally attached Specification, etc. indicates modification of an opening or closing valve mechanism, but does not include any description or indication about a concrete method of modifying the opening or closing valve mechanism.

As indicated in "1. Regarding the invention described in the Originally attached Specification, etc.", FIGS. 2, 3, 7, 9 to 16, 18, 19, 21, 23, 24, 26, 27, 30, 32, 34, and 36 are recognized as clearly showing that an opening or closing valve mechanism includes a hydraulic pressure introduction chamber and a hydraulic pressure introduction passage. To the contrary, no description is included also in the figures about a configuration of an opening or closing valve mechanism which advances a valve body only by an elastic member without a fluid pressure introduction chamber or a fluid pressure introduction passage.

In light of the above, it is acknowledged that the Originally attached Specification, etc. only describes an invention of a fluid pressure cylinder having an opening or closing valve mechanism which comprises a fluid pressure introduction chamber for holding a valve body advanced toward the output member with fluid pressure in a fluid chamber and a fluid pressure introduction passage allowing the fluid chamber and the fluid pressure introduction chamber to communicate with each other, and does not include any description or indication about an opening or closing valve mechanism which advances a valve body only by an elastic member without a fluid pressure introduction chamber or a fluid pressure introduction passage.

Accordingly, the deletion of the matter specifying the invention, "a valve seat to be brought into contact with the valve body, a fluid pressure introduction chamber which holds the valve body advanced toward the output member with fluid pressure in the fluid chamber, and a fluid pressure introduction passage allowing the fluid chamber to communicate with the fluid pressure introduction chamber" from Claim 1 before the amendment, and the introduction of the new matter specifying the invention, "an elastic member which elastically biases the large-diameter shaft part of the valve body toward the fluid chamber to hold the valve body advanced toward the fluid chamber" mean addition of new technical significance in a relationship with a matter to be derived by integrating all descriptions in the Originally attached Specification, etc.

Thus, since the Amendment, which does not fall within a scope of matters described in the Originally attached Specification, etc., does not satisfy the requirements stipulated in Article 17-2(3) of the Patent Act, the Amendment is illegal.

(2) Regarding Demandee's allegation concerning Reason for invalidation 1

A. The demandee alleges that it is obvious for a person skilled in the art that the "compressed coil spring 53a" presented in Example 2 can bias the valve main body 58A alone to be advanced toward the unclamping hydraulic chamber 15 (No. 4 1. [Demandee] (2)). However, the configuration of biasing the valve main body 58A to be advanced toward the unclamping hydraulic chamber 15 only by the compressed coil spring 53a, which is to bias a valve main body only by a coil spring also not in a transient period, has a different object from Example 2, and such configuration is not described or indicated in the Originally attached Specification, etc.

Thus, the demandee's allegation cannot be accepted.

B. The demandee alleges that the configuration of advancing a valve main body only by an "elastic member" without a "fluid pressure introduction chamber" is a matter of common general technical knowledge (No. 4 1. [Demandee] (2)). However, as indicated in the judgment (No. 4 1. [Demandant] (3)), even if a matter is a common general technical knowledge, it cannot be said immediately that the common general technical knowledge falls within a scope described in the Specification or Drawings, and a motivation (indication) is required for understanding the Description of the Specification or Drawings in association with the common general technical knowledge.

As described above, the Originally attached Specification, etc. does not include any description or indication about an opening or closing valve mechanism which advances a valve body only by an elastic member without a fluid pressure introduction chamber or a fluid pressure introduction passage. Thus, even if the configuration of advancing a valve body only by an elastic member without a fluid pressure introduction chamber is a well-known art or a matter of common general technical knowledge, it cannot be said that the configuration falls within a scope of matters described in the Originally attached Specification, etc.

Thus, the demandee's allegation cannot be accepted.

C. The demandee alleges that the Originally attached Specification, etc. includes, in [0122], the description, "various types of opening or closing mechanisms can be employed", and modification to an "opening or closing mechanism" having no "fluid pressure introduction chamber" (hereinafter referred to as "elastic member single structure") can be predicted naturally (No. 4 1. [Demandee] (2)). However, even if the elastic member single structure is an obvious matter from the description of the Originally attached Specification, etc., the ground is required that a person skilled in the art would naturally or definitely select the elastic member single structure from among various modifications, in modifying Example 2 that uses both hydraulic pressure and resilience on the basis of the description of paragraph 0122 in the Originally attached Specification, etc.

However, as described above, <u>all of Examples 1 to 8 use hydraulic pressure alone</u> or in combination with resilience, and the Originally attached Specification, etc. does not describe or indicate a configuration of using only resilience without using hydraulic <u>pressure</u>. Therefore, it is acknowledged that there is no motivation to select the elastic member single structure in modifying Example 2.

Thus, the demandee's allegation cannot be accepted.

The Amendment is, as described in No. 5 2. (1) and (2), to select the "elastic member single structure" and to specify a matter that a "valve main body" is "integrated with" "a small-diameter shaft part" and "a large-diameter shaft part".

When a fluid pressure introduction chamber is arranged, as indicated in No. 4 1. [Demandant] (2), it is obviously required that the small-diameter shaft part and the largediameter shaft part are integrally formed in the valve main body in order to generate a difference in force due to hydraulic pressure to be applied to the valve body. However, in the "elastic member single structure", as shown in Evidence B No. 3, the smalldiameter shaft part and the large-diameter shaft part are not necessarily required.

Accordingly, the demandee only mentions the "elastic member single structure". It cannot be acknowledged that the demandee's allegation is based on the Amendment which employs the "elastic member single structure" and specifies the matter that "the valve main body" is "integrated with" "the small-diameter shaft part" and "the large-diameter shaft part".

D. The demandee alleges that an upward biasing force due to an elastic member can be made larger than a downward force due to hydraulic pressure by increasing a spring constant, or the like of the "compressed coil spring 53a", thereby "holding a valve body advanced toward a fluid chamber" only with the biasing force of the "elastic member", and that the above matter is only within a scope naturally predicted as "various kinds of opening or closing valve mechanisms" in [0122] (No. 4 1. [Demandee] (3)). However, even if it is technically correct that the upward biasing force due to the elastic member can be increased by increasing a spring constant or the like of the "compressed coil spring 53a", this matter is not described or indicated in the Originally attached Specification, etc.

Thus, the demandee's allegation cannot be accepted.

E. The demandee alleges that the "elastic member single structure" falls within a scope of matters described in the Originally attached Specification, etc., based on the description of Example 1 or the like, in addition to the description of Example 2 and [0122] (No. 4 1. [Demandee] (4) and (5)). However, since Example 1 uses hydraulic pressure and Example 2 uses both hydraulic pressure and resilience, a person skilled in the art would naturally understand that the hydraulic pressure common to both examples is an essential configuration and the resilience used only in Example 2 is an arbitrary and additional configuration. It cannot be recognized that modification to the elastic member single structure is obvious.

Thus, the demandee's allegation cannot be accepted.

(3) Reason for invalidation 2

In light of the descriptions A to P in the Originally attached Specification, etc., it is acknowledged that the Originally attached Specification, etc. only describes an invention of a fluid pressure cylinder having an opening or closing valve mechanism comprising a fluid pressure introduction chamber for holding a valve body advanced toward the output member with fluid pressure in a fluid chamber and a fluid pressure introduction passage allowing the fluid chamber and the fluid pressure introduction chamber to communicate with each other, to solve the problem of the invention to provide an opening or closing valve mechanism of a fluid pressure cylinder which is advantageous in reliability and durability.

There is no description or indication about an opening or closing valve mechanism which advances a valve body only by an elastic member without a fluid pressure introduction chamber or a fluid pressure introduction passage. Thus, it is acknowledged that the opening or closing valve mechanism comprising a fluid pressure introduction chamber and a fluid pressure introduction passage is an essential configuration to solve the problem of the invention to provide advantage in reliability and durability.

Therefore, Patent Inventions 1 to 5, which do not describe the essential configuration, lack evidence based on the Originally attached Specification, etc., and are not considered to be described in the Detailed Description of the Invention of the Specification. Thus, the inventions do not satisfy the requirements stipulated in Article 36(6)(i) of the Patent Act.

(4) Regarding Demandee's allegation concerning Reason for invalidation 2

The demandee alleges that the Originally attached Specification, etc. describes two independent objects to provide a fluid pressure cylinder which can be made compact and can reliably detect the change in air pressure, and to improve reliability in detecting a position of an output member and durability, and that Patent Inventions 1 to 5 achieve at least one object, "which can be made compact and can reliably detect the change in air pressure", described in the Originally attached Specification, etc. (No. 4 2. [Demandee] (1) and (2)), and alleges that Patent Inventions 1 to 5, which can reduce moving distance of a valve body, are not contrary to the object, "to improve durability and reliability" (No. 4 2. [Demandee] (3)).

In light of the description A in the Originally attached Specification, etc., it is acknowledged that, in the Application, one of the objects of the invention, "to provide a fluid pressure cylinder which can be made compact", is achieved by implementing a configuration which embeds an opening or closing valve mechanism in a cylinder body by embedding a valve body of the opening or closing valve mechanism in a mounting hole formed in the cylinder body.

However, achieving one of the objects of the invention by employing the above configuration is a different matter from whether the opening or closing valve mechanism which biases a valve main body only with resilience of a compressed coil spring without a fluid pressure introduction chamber and a fluid pressure introduction passage, in Patent Inventions 1 to 5, has been described in the Detailed Description of the Invention in the specification of the Application. As described in "(1) Reason for invalidation 1", such opening or closing valve mechanism is not described or indicated in the Originally attached Specification, etc.

The Originally attached Specification, etc. only describes an invention of a fluid pressure cylinder having an opening or closing valve mechanism comprising a fluid pressure introduction chamber for holding a valve body advanced toward the output member with fluid pressure in a fluid chamber and a fluid pressure introduction passage allowing the fluid chamber and the fluid pressure introduction chamber to communicate with each other, as a device for achieving the object, "to improve durability and reliability". Even if the allegation that Patent Inventions 1 to 5, which can reduce moving distance of a valve body, are not contrary to the above object is technically correct, it cannot be said that Patent Inventions 1 to 5 are supported by the Originally attached Specification, etc.

Thus, the demandee's allegation cannot be accepted.

No. 6 Closing

As described above, due to the Reasons for invalidation 1 and 2, the patent regarding Patent Inventions 1 to 5 violates the provisions of Article 17-2(3) of the Patent Act and Article 36(6)(i) of the Patent Act, and falls under Article 123(1)(i) and (iv) of the Patent Act. Thus, the patent should be invalidated.

The costs in connection with the trial shall be borne by the demandee under the provisions of Article 61 of the Code of Civil Procedure which is applied mutatis mutandis in the provisions of Article 169(2) of the Patent Act.

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

February 5, 2019

Chief administrative judge:KURITA, MasahiroAdministrative judge:SHINOHARA, MasayukiAdministrative judge:HIRAIWA, Shoichi