

Hypothetical Cases

Precondition

- A patent is granted for the invention in the patent application (see “I. Patented Invention”), and a trial for invalidation (an inter partes review by the USPTO’s PTAB, and an opposition by the of EPO’s BoA) is subsequently filed on the grounds that the patent lacks novelty based on the prior art document (see “II. Prior art document”).

- I. Patented Invention : Page 2
- II. Prior art document : Page 3

I. Patented Invention

[Claim]

A water-based paint containing 5 to 20% by mass of component A

Description:

[Technical Field]

The present invention is a water-based paint, especially a water-based primer paint used on the body structure of vehicle.

[Problem to be solved]

Water-based paints had a problem in that they do not adhere well to metal substrates.

[Means for solving the problem]

The present invention has solved the above problem by setting component A to a specific mass percentage.

[Detailed description of the invention]

If a water-based paint contains 5 to 20% by mass of component A (preferably 10 to 15%), it produces excellent adhesion.

[Embodiments]

	Comparative example 1	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Comparative example 2
A (mass %)	3	5	10	15	20	22
Adhesion	bad	good	very good	very good	good	bad

II. Prior art document

(It is assumed that the prior art document had already been published when the patent application was filed.)

[Claim]

A water-based paint containing 5 to 7% by mass of component A and 1% by mass of component X

Description:

[Technical Field]

The present invention is a water-based paint, especially for wood protection.

[Problem to be solved]

It has been desired to improve the glossiness of the water-based paint.

[Means for solving the problem]

The present invention has improved the glossiness by using a water-based paint containing 5 to 7% by mass of component A, and 1% by mass of component X. Because the adhesion unexpectedly deteriorates at such a blended amount, it is preferable to use it when a high level of adhesion is not required.

[Embodiment]

	Comparative example 1	Embodiment 1	Embodiment 2	Embodiment 3	Comparative example 2
A (mass %)	4	5	6	7	8
X (mass %)	0.5	1	1	1	1.5
Adhesion	bad	good	very good	good	bad

Relationship between I. and II.

A water-based paint containing 5 to 20% by mass of component A

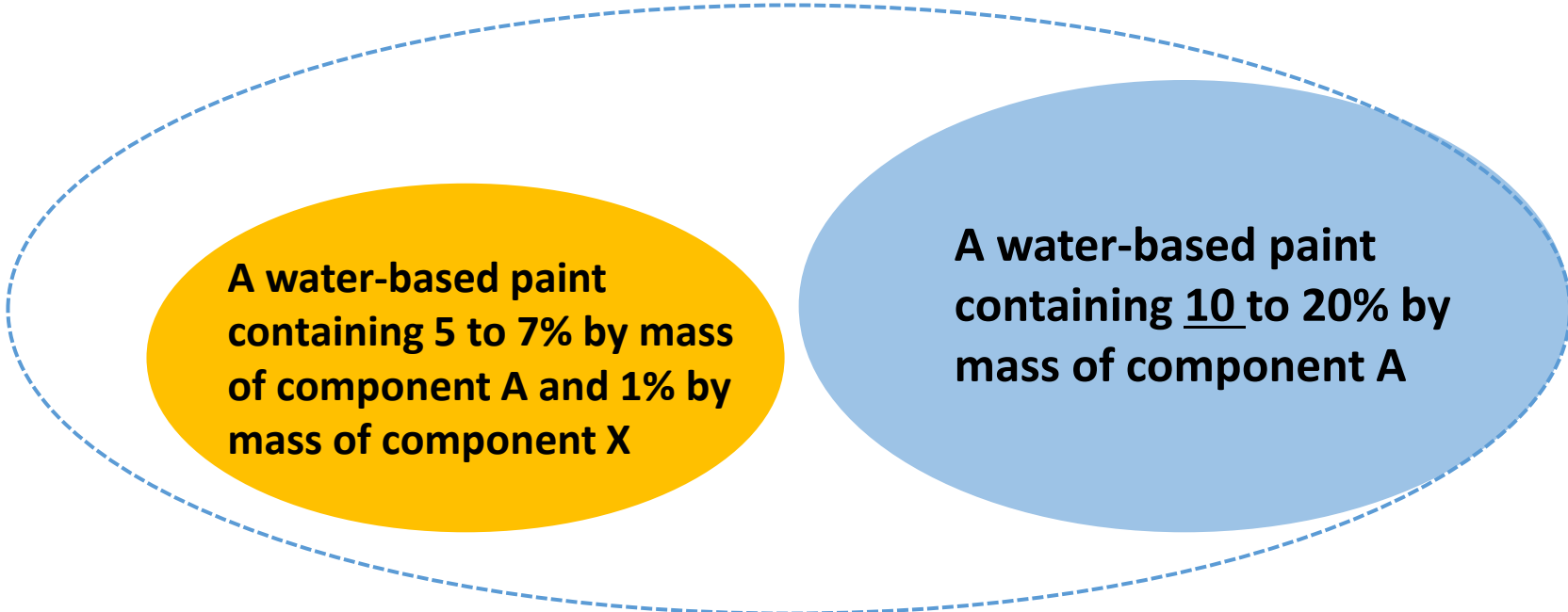
A water-based paint containing 5 to 7% by mass of component A and 1% by mass of component X

Precondition

- In order to avoid grounds for invalidation, the patentee is considering amending/correcting the claims. We will discuss whether or not new matter is introduced in cases 1 to 5 below.
- In each of these cases, it is assumed that there are no grounds for invalidation of the amended/corrected claims.

Case 1a: Limitation of numerical range

- The claim is amended/corrected to “a water-based paint containing 10 to 20% by mass of component A.” Does this amendment/correction introduce new matter?



A water-based paint containing 5 to 7% by mass of component A and 1% by mass of component X

A water-based paint containing 10 to 20% by mass of component A

*[Discussion Points: Does **limiting the numerical range of a claim by using only one of the upper or lower limits of the preferred numerical range** in the detailed description of the invention introduce new matter?]*

Case 1b: Limitation of numerical range

- The detailed description of the invention notes as below. In this case, does amending/correcting the claim to “a water-based paint containing 10 to 20% by mass of component A” introduce new matter?

[Detailed description of the invention]

If a water-based paint contains 5 to 20% by mass of component A, it will produce excellent adhesion.

“Preferably 10 to 15%” is not described in [Detailed description of the invention]. No changes other than above matters ([Embodiment] is reposted as below).

	Comparative example 1	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Comparative example 2
A (mass %)	3	5	10	15	20	22
Adhesion	bad	good	very good	very good	good	bad

[Discussion Points: Does limiting the numerical range of a claim by using a numerical value that is not stated as an upper or lower limit in the detailed description of the invention but stated in the embodiments introduce new matter?]

Case 1c: Limitation of numerical range

- Does amending/correcting the claim to “a water-based paint containing 9 to 20% by mass of component A” introduce new matter?

No changes other than above matters ([Detailed description of the invention], [Embodiment] are reposted as below).

[Detailed description of the invention]

If a water-based paint contains 5 to 20% by mass of component A (preferably 10 to 15%), it produces excellent adhesion.

[Embodiment]

	Comparative example 1	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Comparative example 2
A (mass %)	3	5	10	15	20	22
Adhesion	bad	good	very good	very good	good	bad

[Discussion Points: If the claim is amended/corrected by using numerical values that are close to the specifically stated values but are not specified, does the amendment/correction introduce new matter?]

Additional Question

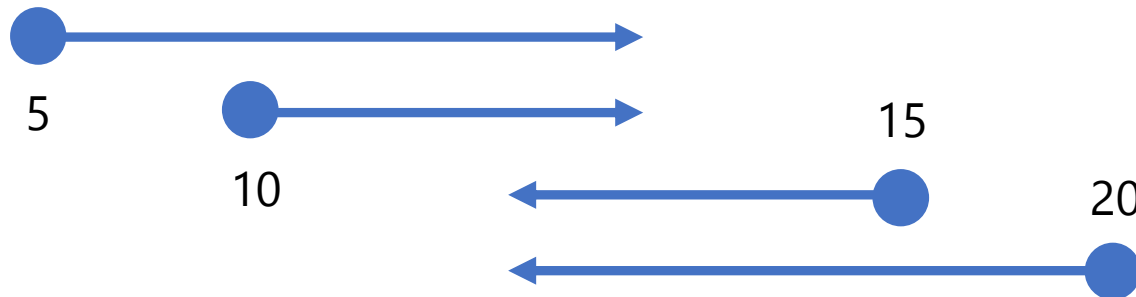
- The description of the patented invention is as below:

[Detailed description of the invention]

If a water-based paint contains more than 5% by mass of component A (preferably more than 10), it produces excellent adhesion.

If a water-based paint contains less than 20% by mass of component A (preferably less than 15), it produces excellent adhesion.

The upper and lower limits are stated independently.



No explicit mention of a particular combination of upper and lower bounds.

- Is there any change in the range in which numerical ranges can be corrected due to the combination of upper and lower limits not being explicitly stated?

Can the number range "5-20" be amended to "5-15" or "10-20" etc.?

Case 2: Limitation of numerical range (disclaimer / negative limitation)

- It is assumed that a prior art that denies the novelty of the claimed invention was discovered accidentally, although its technical field and technical concept are significantly different from the claimed invention.
- In order to avoid grounds for invalidation due to lack of novelty, the patentee is considering amending/correcting the claim by removing the prior art from the claim (for example, “xxx, wherein the paint does not contain ○○○.”). Does this amendment/correction introduce new matter?

Note: Here, it is assumed that “a water-based paint containing 5 to 20% by mass of component A, wherein the paint does not contain OOO,” is not described in the patented invention’s description.

The technical field and technical concept are significantly different from the claimed invention.

A prior art that denies the novelty of the claimed invention and being discovered accidentally

XXX

[Discussion Points: If the claim is amended/corrected as a disclaimer/negative limitation, does this amendment/correction generally introduce new matter?]

Additional Question

- In order to avoid grounds for invalidation using prior art II, the patent holder of patent I is considering amending the claims as follows. Does this amendment/correction introduce new matter?

“a water-based paint containing 5 to 20% by mass of component A, wherein the paint does not contain 5 to 7% by mass of component A and 1% by mass of component X.”

Note: the prior art II is a document in which the invention is different from that of the patented invention, and that the effect of the invention regarding adhesiveness is also inconsistent with the patented invention.

A water-based paint containing 5 to 7% by mass of component A and 1% by mass of component X

A water-based paint containing 5 to 20% by mass of component A

[Discussion Points: If the claim is amended/corrected as a disclaimer/negative limitation, does this amendment/correction introduce new matter?]

Additional Question

- In order to avoid grounds for invalidation using prior art II, the patent holder of patent I is considering amending the claims as follows. Does this amendment/correction introduce new matter?

“a water-based paint containing 5 to 20% by mass of component A, wherein the paint does not contain 5 to 7% by mass of component A and 1% by mass of component X especially for wood protection”

A water-based paint containing 5 to 7% by mass of component A and 1% by mass of component X especially for wood protection

A water-based paint containing 5 to 20% by mass of component A

[Discussion Points: When the exclusion range is further limited by the use, does this amendment/correction introduce new matter?]

Case 3: Definition of numerical value

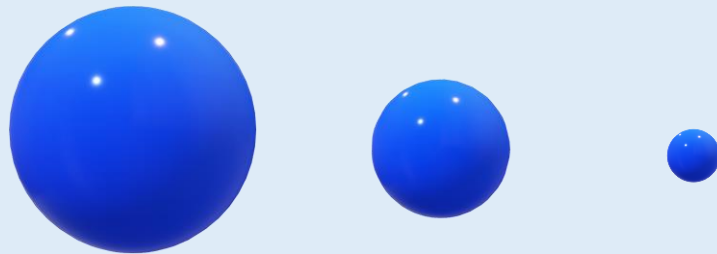
- The detailed description of the invention describes as below:

Component A is in particle form, and for the purpose of improving adhesion, the particle size of component A has an average particle size of 10 μm or less in mean volume diameter.

Note: the measurement method using “mean volume diameter” is also described in detail.

- Does the amendment/correction to the claim of “a water-based paint containing 5 to 20% by mass of component A comprising an average particle size of 10 μm or less” introduce new matter?

(FYI) The value of the average particle diameter may vary depending on the measurement method thereof. The value of average particle diameter includes “Mean Volume Diameter” and “Mean Number Diameter” etc.



radius : 10 (mm) radius : 5 (mm) radius : 1 (mm)
volume : 4187(mm³) volume : 523(mm³) volume : 4(mm³)

$$\text{Mean Number Diameter} = \frac{(10+5+1)}{(1+1+1)} = 5.3 \text{ mm}$$

$$\text{Mean Volume Diameter} = \frac{(10 \cdot 4187 + 5 \cdot 523 + 1 \cdot 4)}{(4187 + 523 + 4)} = 9.4 \text{ mm}$$

Case 4: Incorporating references

- The detailed description of the invention describes as below:

Patented Invention

[Detailed description of the invention]

The contents of the U.S. Patent Application Publication No. XXXX are hereby incorporated herein by reference as if fully set forth herein, as part of this description...

U.S. Patent Application Publication No. XXXX

[Embodiments]

The water-based paint of the present invention improves adhesion by containing 5 to 20% by mass of component A. As shown in the embodiment below, it was found that the inclusion of 10% by mass of component W also unexpectedly improves the glossiness.

	Comparative example 1'	Embodiment 1'	Embodiment 2'	Embodiment 3'	Embodiment 4'	Comparative example 2'
A (mass %)	3	5	9	16	20	22
W (mass %)	5	10	10	10	10	20
Adhesion	bad	good	good	good	good	bad

- In this case, if the claim is amended/corrected to "a water-based paint containing 10 to 15% by mass of component A and 10% by mass of component W," does this amendment/correction introduce new matter?

[Discussion Points: To what extent can technical matters described in the reference be added to the claim?]

Case 5: Identification of multiple components

- The description of the patented invention is as below:

[Detailed description of the invention]

5 to 20% by mass (preferably 10 to 15%) of component A and 5 to 20% by mass (preferably 10 to 15%) of component B are contained in a water-based paint, excellent adhesion will be produced.

[Embodiments]

	Comparative example 1	Embodiment 1	Embodiment 2	Embodiment 3	Embodiment 4	Comparative example 2
A (mass %)	3	5	10	15	20	22
B (mass %)	5	10	15	15	10	20
Adhesion	bad	good	very good	very good	good	bad

- Does the amendment/ correction to the claim of "a water-based paint containing 10 to 15% by mass of component A and 10 to 15% by mass of component B" introduce new matter?

[Discussion Points: If the detailed description of the invention includes preferred numerical ranges for component A and component B **independently**, and the embodiments describe **partial combinations within those**, does this amendment/correction introduce new matter?]

