Trial decision

Invalidation No. 2012-800143

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The case of trial regarding patent invalidation of Japanese Patent No. 3477995, entitled "Pointer device for vehicle," between the parties above has resulted in the following trial decision:

Conclusion

The appeal of the case was groundless.

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

Reason

No. 1 History of the procedures

Japanese Patent No. 3477995 in question (hereinafter, referred to as "the Patent") was applied for as Japanese Patent Application No. H8-128704 on May 23, 1996, and registration of the establishment of the patent right was made on Oct. 3, 2003 (the title of the invention is Pointer device for vehicle, and the number of claims is 4).

With respect to the Patent, the trial for patent invalidation of the case (Invalidation No. 2012-800143) has been demanded from Demandant by a written demand for trial dated Sep. 3, 2012 with the object of the demand that the patents for the inventions according to claim 1 to claim 3 shall be invalidated, and, then, a written reply dated Nov. 21 of the same year was submitted by Demandee.

After that, an oral proceedings statement brief was submitted as of Mar. 15, 2013 from Demandee, and, then, an oral proceedings statement brief was submitted as of Mar. 18 of the same year from Demandant, and the first oral proceeding was performed on Mar. 27 of the same year.

Hereinafter, relating to the Patent, the patents for the inventions according to claim 1, claim 2, and claim 3 of the Patent are respectively called Patent 1, Patent 2, and Patent 3. In addition, relating to the Patent, inventions according to claim 1, claim 2, and claim 3 of the Patent are respectively called Invention 1, Invention 2, and Invention 3, and they may be called generally the Invention. Furthermore, hereinafter, the description and drawings attached to the application concerning the Patent are referred to as the Description, etc.

Meanwhile, although, regarding the Patent, another patent trial for invalidation (invalidation No. 2011-800163) was demanded by the Demandant on Sep. 8, 2011, a trial decision concluding that the demand for trial was groundless was made as of Mar. 15, 2012, and that trial decision was finalized.

No. 2 The demandant's allegation

With an object of the demand that Patent 1, Patent 2, and Patent 3 should be invalidated, the Demandant submitted, about there being a reason for the demand, the means of proof of Evidence A No. 1 to Evidence A No. 12, and alleges that, since all of Patents 1 to 3 were patented in breach of the provisions of Article 29(2) of the Patent Act, these should be invalidated under the provisions of Article 123(1)(ii) of the same Act.

When the described contents of the written demand for trial, the oral proceedings statement brief (by Demandant), and the first oral proceeding record are taken together, the reasons that the Patent should be invalidated are as outlined below.

1 Reasons for invalidation

(1) Regarding Invention 1

The invention described in Evidence A No. 1 is an instrument for a vehicle to turn off a scale-plate lighting device of an instrument for a vehicle along with turning-off of an ignition key, and, according to the well-known art described in Evidence A No. 2 to Evidence A No. 7, fade-out that makes luminance of irradiation light be lowered gradually when turning off illumination is a conventionally well-known technology in illumination of such as a vehicle, and it is also conventionally well-known that a certain psychological effect is exerted by fade-out. Furthermore, according to the technology described in Evidence A No. 8, it is publicly known that, also in illumination of meters, brightness is made to be changed gradually at the time of turning off a light in consideration of visibility. Therefore, in light of the level of the technologies at the time of the application of the Patent that are described in Evidence A No. 11 and Evidence A No. 5, there is no particular difficulty in applying the well-known art in illumination of vehicles described in Evidence A No. 2 to Evidence A No. 7 to the invention described in Evidence A No. 1.

Therefore, when seen from the invention described in Evidence A No. 1, the wellknown art described in Evidence A No. 2 to Evidence A No. 7, the technology described in Evidence A No. 8, and the common general technical knowledge described in Evidence A No. 11 and Evidence A No. 5, Invention 1 is easily conceivable.

(2) Regarding Invention 2

The invention described in Evidence A No. 1 is also of an instrument for a vehicle that turns off a scale-plate lighting device and a pointer lighting device of an instrument for a vehicle along with turning-off of an ignition key, and, thus, as with Invention 1, Invention 2 is also easily conceivable when seen from the invention described in Evidence A No. 1, the well-known art described in Evidence A No. 2 to Evidence A No. 7, the technology described in Evidence A No. 8, and the common general technical knowledge described in Evidence A No. 5.

(3) Regarding Invention 3

It is publicly known, from Evidence A No. 9, that timing of turning off illumination of a pointer at the time of turning off a key is shifted from timing of turning off illumination of a scale plate, and, therefore, Invention 3 is easily conceivable when seen from the invention described in Evidence A No. 1, the well-known art described in Evidence A No. 2 to Evidence A No. 7, the technology described in Evidence A No. 8, the common general technical knowledge described in Evidence A No. 11 and Evidence A No. 5, and the technology described in Evidence A No. 9.

2 Means of proof

All the means of proof submitted by the Demandant about the above-mentioned reasons for invalidation are publications that were distributed in advance of the application of the Patent, and they are as follows. Details of the described contents of each Evidence A will be discussed later.

* Evidence A No. 1: a CD-ROM of Japanese Utility Model Application No. H3-81935 (Japanese Unexamined Utility Model Application Publication No. H5-90323); this relates to an instrument for a vehicle (the title of the device), and this is a main cited document cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 2: Japanese Unexamined Patent Application Publication No. S58-53535; this relates to a lighting circuit of a room light for a vehicle (the title of the invention), and

is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 3: a CD-ROM of Japanese Utility Model Application No. H3-39144 (Japanese Unexamined Utility Model Application Publication No. H6-25033); this relates to an afterglow-type vehicle interior lighting control device (the title of the device), and is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 4: a CD-ROM of Japanese Utility Model Application No. H3-109047 (Japanese Unexamined Utility Model Application Publication No. H5-49494); this relates to an illumination device for vehicle (the title of the device), and is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 5: Japanese Unexamined Patent Application Publication No. H5-326182; this relates to an electric-discharge lamp lighting device (the title of the invention), and is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 6: Japanese Unexamined Patent Application Publication No. H5-238309; this relates to a room lamp turning off control device for vehicle (the title of the invention), and is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 7: Japanese Unexamined Patent Application Publication No. H5-13176; this relates to a lighting device (the title of the invention), and is a well-known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 8: Japanese Utility Model Publication No. H1-32592; this relates to a meter lighting control circuit for vehicle (the title of the device), and is a publicly known example cited in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 9: Japanese Unexamined Patent Application Publication No. H4-266536; this relates to a lighting device for instruments for vehicle (the title of the invention), and is a publicly known example cited in the reasons for invalidation regarding Patent 3.

* Evidence A No. 10: Kojien, the fifth edition, Sinmura, I. (ed.), issued on Nov. 11, 1998, Iwanami Bookstore, page 1463 and page 1812

* Evidence A No. 11: Japanese Unexamined Patent Application Publication No. H3-170816; this relates to a display device having a light source of ultraviolet light (the title of the invention), and is one that has been adduced as evidence showing the technological level at that time of the application of the Patent in the reasons for invalidation regarding Patents 1 to 3.

* Evidence A No. 12: the written trial decision of invalidation No. 2011-800163

No. 3 Demandee's counterarguments

The Demandee requests a decision that the demand for the trial for patent

invalidation of the case is groundless, and, about there being no reason in the demand, has made a rebuttal statement roughly as follows according to the written reply, the oral proceedings statement brief (by Demandee), and the first oral proceeding record.

Invention 1 is a technical idea to give, along with turning-off of a key switch, novel visibility to a crew after turn-off of the key switch by including a control means for controlling so as to make luminance of irradiation light of a scale plate irradiation means be lowered gradually, whereas the invention described in Evidence A No. 1 is nothing but one that just turns off a scale-plate lighting device and a pointer lighting device of an instrument for a vehicle along with turning-off of an ignition key.

Furthermore, the well-known art described in Evidence A No. 2 to Evidence A No. 7 is, unlike a pointer device for a vehicle according to the Invention, a light reduction technology in a lighting device that lights around a human, such as a vehicle-interior room lamp, a residential lighting device, or an electric-discharge lamp. In addition, the technology described in Evidence A No. 8 is a technology to facilitate visualization of a meter even immediately after turning-off of a head lamp by making the meter reduce light and continue lighting for a predetermined amount of time after turning-off of a head lamp and thereby making it possible to adjust to brightness change of meter illumination, and, thus, it is not a technology to devise change in brightness of a pointer and a scale plate along with turning off a key switch. Therefore, even by the technology described in Evidence A No. 8 and the common general technical knowledge at that time of the application of the Patent, a motivation to apply the well-known art in a lighting device described in Evidence A No. 2 to Evidence A No. 7 to the invention described in Evidence A No. 1 would not be caused, and, even if they are combined, the technical idea of Invention 1 would not be derived.

Therefore, Invention 1 is not easily conceivable from the invention described in Evidence A No. 1, the well-known art described in Evidence A No. 2 to Evidence A No. 7, and the technology described in Evidence A No. 8.

The reasoning is similar for Invention 2 and Invention 3 that correspond to ones that substantially limit Invention 1.

No. 4 Judgment by the body

1 The Invention

As seen from statements such as those in the Description, etc., Inventions 1 to 3 are as follows as described in claims 1 to 3 of the scope of claims thereof. Meanwhile, there was no request for correction about the Description, etc.

(1) Invention 1

"[Claim 1] A pointer device for a vehicle, comprising: a scale plate (20); a pointer (30) to perform indication display on the scale plate; and irradiation means (50) for irradiating the scale plate by light, the pointer device for a vehicle further comprising

control means (112, 113, 120, 121, 130) for controlling luminance of irradiation light of the scale plate irradiation means so as to be lowered gradually when a key switch (IG) of the vehicle is turned off."

(2) Invention 2

"[Claim 2] A pointer device for a vehicle, comprising: a scale plate (20); a light emitting pointer (30) to perform indication display on the scale plate; scale-plate irradiation means (50) for irradiating the scale plate by light; and pointer irradiation means (31) for making the light emitting pointer emit light by irradiating light to the light emitting pointer, the pointer device for a vehicle further comprising

control means (111a, 112A, 113, 113A, 113B, 122-124, 130A) for controlling luminance of irradiation light of the scale plate irradiation means and luminance of irradiation light of the pointer irradiation means so as to be respectively lowered gradually when a key switch (IG) of the vehicle is turned off."

(3) Invention 3

"[Claim 3] The pointer device for a vehicle according to claim 2, wherein the control means performs control so as to make degrees of decline of luminance of irradiation light of the scale plate irradiation means and irradiation light of the pointer irradiation means differ from each other."

2 The features of the Invention

Statements of the Description, etc. will be taken into consideration to understand the technical features of the Invention more clearly.

(1) Statements of the Description

In the detailed description of the Invention, the following matters are described.

A "[0001] [Field of the Invention] The present invention relates to a pointer device for a vehicle.

[0002] [Conventional Art] Conventionally, in a pointer device for a vehicle, as shown in Japanese Unexamined Patent Application Publication No. H6-201410, for example, there have been ones that gave novel visibility to a crew by making, along with turning on of a key switch of the vehicle in question, a dial emit light with the lapse of a predetermined time after having made a pointer emit light.

[0003] [Problem to be solved by the invention] However, in the above-mentioned pointer device, it is only possible to give novel visibility after turning on a key switch, and it cannot give novel visibility along with turning-off of a key switch. Therefore, in order to cope with such a situation, an object of the present invention is to, in a pointer device for a vehicle, devise change in brightness of a pointer and a scale plate along with turning-off of a key switch to give novel visibility to a crew after the key switch is turned off."

B "[0004] [Means for solving the problem] To achieve the above-mentioned object, according to the inventions described in claims 1 and 4, a control means performs control of luminance of irradiation light of a scale plate irradiation means so as to be lowered gradually along with turning-off of a key switch. By this, brightness of a scale plate is gradually lowered after the key switch is turned off, and, therefore, novel visibility in this type of pointer devices after the key switch is turned off can be provided to a crew.

[0005] In this case, if a light-emitting diode is used as a scale plate irradiation means, color change of irradiation light is not caused in the course of lowering luminance thereof, and, as a result, a sense of discomfort is not given to a crew. In addition, when a scale plate and a pointer are lidded by a cover made of a smoke material, a novel visibility that comes with the above-mentioned lowering of brightness of the scale plate can be provided to a crew at any time of the day or night.

[0006] Furthermore, according to the inventions described in claims 2-4, control means performs control of scale plate irradiation means and pointer irradiation means so as to make luminance of irradiation light of each of them be lowered gradually along with turning-off of a key switch. By this, brightness of each of the scale plate and the light emitting pointer is lowered gradually after the key switch is turned off, and, thus, novel visibility in this type of pointer devices after the key switch is turned off can be provided to a crew.

[0007] In this case, if a light-emitting diode is used as scale plate irradiation means and pointer irradiation means, color change of irradiation light in each of them is not caused in the course of lowering luminance thereof, and, as a result, a sense of discomfort is not given to a crew. In addition, when a scale plate and a light emitting pointer are lidded by a cover made of a smoke material, a novel visibility that comes with the above-mentioned lowering of brightness of the scale plate and brightness of the light emitting pointer can be provided to a crew at any time of the day or night.

[0008] Here, as is the case with the invention described in claim 3, when control means performs control in a manner that, a degree of decline of luminance of irradiation light of

each of the scale plate irradiation means and the pointer irradiation means are made to differ from each other, novel visibility different from the novel visibility according to the invention described in claim 2 can be provided. In addition, as with the invention described in claim 4, if a control means stops the control along with a detection of a seating detection means, a wasteful operation such as performing the above-mentioned luminance lowering control even after the crew has left the vehicle can be prevented."

C "[0009] [Embodiments of the invention] Hereinafter, each embodiment of the present invention will be described by reference to the drawings.

(First embodiment) FIG. 1 to FIG. 5 indicate a first embodiment of a pointer device for a vehicle according to the present invention, and this pointer device is arranged in an instrument panel of the vehicle in question.

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[0014] Under control of the microcomputer 80, the drive circuit 90a drives each lightemitting diode 31a to emit light. The drive circuit 90b drives each light-emitting diode 50a and makes them emit light under control of the microcomputer 80. In the first embodiment configured in this way, in the ON state of the ignition switch IG, the microcomputer 80 sets, based on execution of a computer program following the flow chart of FIG. 4, the light emitting luminance Y to an initial luminance A in step 100, makes determination of NO in step 110, and performs light-emission drive processing of each light-emitting diodes 31a and 50a in step 120. Note that the light emitting luminance Y indicates light emitting luminance of the light emitting element 31 and the light source 50.

[0015] Then, along with the above-mentioned light-emission drive processing, the drive circuit 90a performs light-emission drive of each light-emitting diode 31a so as to make light emitting luminance of the light emitting element 31 be Y=A, and, in addition, the drive circuit 90b performs light-emission drive of each light-emitting diode 50a so as to make light emitting luminance of the emitting element 50 be Y=A. By this, the scale plate 20 is irradiated by each light-emitting diode 50a of the light source 50 at the initial luminance A. In addition, the self-emitting pointer 30 is irradiated by each light-emitting element 31 at the initial luminance A and emits light.

[0016] In such a state, when the ignition switch IG is turned off (refer to FIG. 5), determination of YES is made in step 110, and time data t is cleared to t=0 in step 111. After that, in the processing circulating steps 112, 113, 120, 130, according to time data t=t+1 to be updated in an added manner over and over again in step 113, the light emitting luminance Y is calculated in step 112 based on the following Expression 1, and, based on

this light emitting luminance Y, light-emission drive processing of each light-emitting diode 31a and 50a is performed in step 130.

[0017]

[Expression 1] $Y=A\{1-(t/T)\}$

where, in the formula of Expression 1, symbol T corresponds to a value that specifies a ratio to lower light emitting luminance of each of the light emitting element 31 and the light source 50. Then, along with such light-emission drive processing, the drive circuit 90a performs light-emission drive of each light-emitting diode 31a so as to make the light emitting element 31 emit light at each piece of calculated luminance Y in step 112. In addition, the drive circuit 90b performs light-emission drive of each light at each piece of calculated luminance Y in step 112.

[0018] For this reason, as shown in FIG. 5, along with turning-off of the ignition switch IG, light emitting luminance of each of the light emitting element 31 and the light source 50 is lowered along each of the straight lines L1 and L2 in series. Accordingly, brightness of the self-emitting pointer 30 and brightness of the scale plate 20 are lowered in a similar fashion. In this way, after turning-off of the ignition switch IG, the self-emitting pointer 30 and the scale plate 20 become dark in proportion to increase of time data t without becoming dark at once, and, therefore, it is possible to provide to a crew novel visibility of the self-emitting pointer 30 and the scale plate 20 after the turning-off of the ignition switch IG.

[0019] In this case, since light-emitting diodes are being adopted in the self-emitting pointer 30 and the scale plate 20, emission colors do not change in the course of lowering the light emitting luminance of each of the self-emitting pointer 30 and the scale plate 20. Consequently, a sense of discomfort would not be given to a crew. Furthermore, if the front cover 70 is made of a smoke material as mentioned above, the course of lowering brightness of each of the self-emitting pointer 30 and the scale plate 20 after turning-off of the ignition switch IG as described above is visible at any time of the day or night, and, consequently, it becomes possible to provide such novel visibility at any time of the day or night.

[0020] Note that, when t becomes T and determination in step 120 is YES, the abovementioned light-emission drive processing is stopped based on Y=0 in step 121. By this, light emitting luminance of the light emitting element 31 and light emitting luminance of the light source 50 become zero. At this time, if the front cover 70 is made of a smoke material as mentioned above, its inside is absolutely invisible." D "(Second embodiment) FIG. 7 illustrates the prominent features of the second embodiment of the present invention.

[0022] In the second embodiment, a part of the flow chart after step 111 in the flow chart of the first embodiment is modified as shown in FIG. 7. The other constitutions are similar to those of the first embodiment. In the second embodiment configured in this way, when time data t is cleared to t=0 in step 111 in a similar fashion as described in the first embodiment, the light emitting luminance of the light source 50 (Hereinafter, referred to as light emitting luminance Y1) is set, in the next step 111a, to predetermined luminance B (see FIG. 8) that is lower than the initial luminance A described in the first embodiment.

[0023] After that, processing to circulate steps 112A, 113, 113A and 130A is performed. In this processing, according to time data t=t+1 that is updated in an added manner repeatedly in step 113, the light emitting luminance Y is calculated based on the above Expression 1 in step 112A, and, in conjunction with this, the light emitting luminance Y1 is calculated based on the following Expression 2. Meanwhile, in the second embodiment, the light emitting luminance Y after step 112A is processed as light emitting luminance of only the light emitting element 31. Accordingly, value T in Expression 1 corresponds only to the light emitting element 31.

[0024]

[Expression 2] Y1=B $\{1-(t/T1)\}$

where, reference character T1 is a value smaller than the above-mentioned value T (see FIG. 8), and corresponds to a value that specifies a rate of lowering light emitting luminance of the light source 50. Then, in step 130A, light-emission drive processing of each light-emitting diode of the light emitting element 31 is performed based on the light emitting luminance Y, and also light-emission drive processing of each light-emitting diode of the light of the light emitting based on the light emitting diode of the light-emission drive processing of each light-emitting diode of the light-emission drive processing of each light-emitting diode of the light emitting based on the light emitting luminance Y1.

[0025] Along with such light-emission drive processing, light-emission drive of each lightemitting diode 31a is made by the drive circuit 90a in such a way that the light emitting element 31 will emit light at each piece of luminance Y calculated in step 112A. Furthermore, each light-emitting diode 50a is light-emission driven by the drive circuit 90b in such a way that the light source 50 will emit light at each piece of luminance Y1 calculated in step 112A.

[0026] Consequently, before reaching t=T1, along with turning-off of the ignition switch IG, light emitting luminance of each of the light emitting element 31 and the light source 50 lowers gradually in series along each of the straight line L3 and L2, as shown in FIG. 8. Therefore, while maintaining a state that the self-emitting pointer 30 is brighter than the

scale plate 20, the brightness of the self-emitting pointer 30 and the brightness of the scale plate 20 is lowered in a similar fashion.

[0027] After that, when t becomes T1 and determination in step 113A becomes YES, lightemission drive processing of the light source 50 is stopped based on Y1=0 in step 113B. By this, light emitting luminance of the light source 50 becomes zero. Afterward, in the processing to circulate steps 120, 122, 123, and 124, according to time data t updated in an added manner in step 123, the light emitting luminance Y of the light emitting element 31 is calculated based on Expression 1 in step 122, and, based on each piece of light emitting luminance Y calculated in step 124, light-emission drive processing of each light-emitting diode of the light emitting element 31 is performed.

[0028] Along with such light-emission drive processing, in a state that light emission of the light source 50 is being stopped, each light-emitting diode 31a is light-emission driven by the drive circuit 90a in a manner that the light emitting element 31 will emit light at each piece of luminance Y calculated in step 122. Consequently, as shown in FIG. 8, until t=T is reached after t=T1, only light emitting luminance of the light emitting element 31 is lowered in series along the straight line L2. Accordingly, the brightness of the self-emitting pointer 30 is also lowered in a similar fashion.

[0029] As described above, in the second embodiment, brightness of each of the selfemitting pointer 30 and the scale plate 20 becomes dark after turning-off of the ignition switch IG according to increase of time data t while maintaining the state that the selfemitting pointer 30 is brighter than the scale plate 20, and, therefore, novel visibility of the self-emitting pointer 30 and the scale plate 20 after turning-off of the ignition switch IG that is different from the novel visibility of the first embodiment can be provided to a crew."

(2) Regarding Invention 1

According to the statements of the above-mentioned described matters A to D, and FIGS. 1 to 5 concerning the Invention, it was not possible to give, in a pointer device for a vehicle, novel visibility along with turning-off of a key switch, conventionally. In contrast, it is recognized that the Invention 1 has a technical feature in a point that Invention 1 has an effect that "brightness of a scale plate is gradually lowered after the key switch is turned off, and, therefore, novel visibility in this type of pointer device after the key switch is turned off can be provided to a crew" (B [0004]) by "comprising control means (112, 113, 120, 121, 130) for controlling luminance of irradiation light of the scale plate irradiation means so as to be lowered gradually when a key switch (IG) of the vehicle is turned off" (claim 1).

Then, according to the above-mentioned described matter C, a specific control means for controlling so as to make luminance of irradiation light of a scale plate irradiation means be lowered gradually is one in which the microcomputer 80 controls driving of the light source 50 following the flow chart shown in FIG. 4 of the Description, etc. so as to make the light emitting luminance Y of irradiation light of the scale plate irradiation means be lowered gradually according to $Y=A\{1-(t/T)\}$, where A is an initial luminance, and T is a value for specifying a rate of lowering.

In this control means, it can be perceived that the light emitting luminance Y lowers, following the above-mentioned relational expression, in a linear fashion from luminance A that is the luminance at the time of point when the ignition switch IG is turned off, and becomes zero after a lapse of time T, as shown in FIG. 5 of the Description, etc.

(3) Regarding Invention 2

It is recognized that Invention 2 has a technical feature in a point that it exerts, by "comprising control means (111a, 112A, 113, 113A, 113B, 122-124, 130A) for controlling luminance of irradiation light of the scale plate irradiation means and luminance of irradiation light of the pointer irradiation means so as to be respectively lowered gradually when a key switch (IG) of the vehicle is turned off" (Claim 2), an effect that "after turning-off of the ignition switch IG, the self-emitting pointer 30 and the scale plate 20 become dark in proportion to increase of time data t without becoming dark at once, and, therefore, it is possible to provide to a crew novel visibility of the self-emitting pointer 30 and the scale plate 20 after the turning-off of the ignition switch IG." (C [0018]).

Specific control means for controlling luminance of irradiation light of each of the scale plate irradiation means and the pointer irradiation means in a manner being gradually lowered is similar to that of the above-mentioned (2).

(4) Regarding Invention 3

It is recognized that Invention 3 has a technical feature in a point that it exerts, by performing control, in Invention 2, in such a way that "the control means performs control so as to make degrees of decline of luminance of irradiation light of the scale plate irradiation means and irradiation light of the pointer irradiation means differ from each other" (claim 3), an effect that "brightness of each of the self-emitting pointer 30 and the scale plate 20 becomes dark after turning-off of the ignition switch IG according to increase of time data t while maintaining the state that the self-emitting pointer 30 is brighter than the scale plate 20, and, therefore, novel visibility of the self-emitting pointer 30 and the

scale plate 20 after turning-off of the ignition switch IG that is different from the novel visibility of the first embodiment can be provided to a crew." (D [0029]).

Then, specific control means for performing control so as to make degrees of decline of luminance of irradiation light of the scale plate irradiation means and irradiation light of the pointer irradiation means differ from each other is as described in the described matter D and FIG. 8 as the second embodiment.

3 Described matters and cited inventions and the like in each Evidence A

Described matters of each Evidence A, and inventions and well-known art or publicized prior art perceived from each Evidence A are as follows.

(1) The invention described in Evidence A No. 1

A Described matters

In the CD-ROM of Japanese Utility Model Application No. H3-81935 (Japanese Unexamined Utility Model Application Publication No. H5-90323) that is the primary Cited Document related to the reasons for invalidation and is Evidence A No. 1, there are described, relating to an instrument for a vehicle (the title of the device), the following matters a to e together with drawings.

a "[0001]

[Industrial Application Field] The present device relates to an instrument for a vehicle for indicating, for example, a running speed, an engine speed, and the like, and, more particularly, to an instrument for a vehicle of what we call a blackout type, in which, when a vehicle is not used; that is, when an ignition key is not inserted, its whole surface becomes dark."

b "[0004]

[Problem to be Solved by the Device] However, although, in an instrument for vehicle 90 of the aforementioned conventional constitution, direct illumination of transmitted illumination can be used for a scale-plate lighting device 91 for a scale plate 93, a pointer lighting device 92 for a pointer 94 is of indirect illumination in which, using the pointer 94 itself as a light guide, light is made to be reflected by a reflection coating film 94a formed of, e.g. white coating material and the like on the back face of the pointer 94, and thus it is unavoidable that the pointer lighting device 92 is of low efficiency and dark in comparison with the scale-plate lighting device 91.

[0005] Accordingly, on the occasion of setting transmittance of the aforementioned window glass 95, it is necessary to set the transmittance high to a degree that the pointer 94 side can

be read, and, by this, even in a period during which an ignition key is turned off, the pointer 94, a white coating 94a in particular, is seen through the window glass 95 when direct sunlight is irradiated to the instrument for vehicle 90, resulting in causing a problem point that a sense of discomfort would be given to a user exceedingly. Therefore, there is an issue to solve this problem point."

c "[0007]

[Examples]

Next, the present device will be described in detail based on an example shown in Figures. Indicated by a reference numeral 1 FIG. 1 and FIG. 2 is an instrument for a vehicle according to the present device, and a scale-plate lighting device 3 that performs illumination in a transmitting manner is provided in a scale plate 2 of the instrument for vehicle 1, and, in a pointer 4, there is provided a pointer lighting device 5 that performs illumination by reflecting light by a reflection coating film 4a applied to the pointer 4. Further, a window glass 6 is formed of a smoke board having an appropriate transmittance, and it is similar to the conventional example in a point that it is supposed that the scale-plate lighting device 3 and the pointer lighting device 5 are turned off together at the time of turning-off of an ignition key, and, when the vehicle is not in use, the instrument for vehicle 1 is in a blackout state."

d "[0011]

Here, when running is stopped and an ignition key 10 is turned off, at the same time as the scale-plate lighting device 3 and the pointer lighting device 5 are turned off, also the calculation circuit 9 stops its operation after generating a predetermined number of reverse rotation pulses, and, by the reverse rotation pulses, the pointer 4 rotates from the scale-0 position 20a to the further lower side; that is, to the side of a negative deflection angle, and moves to a position within a range covered by the pointer mask plate 7."

e "[0014]

[Advantage of the Device]

As has been described above, according to the present device, there is provided a pointer mask plate made of an opaque member having dark color in at least its window glass side in a position that is in a more negative side than the scale-0 position of the scale plate of the instrument for a vehicle and that is between the window glass and the pointer, and the instrument for a vehicle is made to be an instrument for a vehicle in which the pointer is made to turn to a position more negative than the scale-0 position to be housed within the pointer mask plate at the time of turning-off of an ignition key. Accordingly, the pointer to which a reflection coating film is applied is covered with the pointer mask plate, and thus a

blackout effect is maintained, thereby exerting an excellent effect of preventing a sense of discomfort from being given to a viewer. Otherwise, the reflection coating film causes the pointer to be easily observed from outside in particular due to irradiation of outside light such as direct sunlight to the window glass."

B Cited Invention

According to the above-mentioned descriptions in c, d, when the ignition key 10 is turned off, the scale-plate lighting device 3 and the pointer lighting device 5 are turned off together, and, therefore, it is natural to understand that an instrument for a vehicle according to Evidence A No. 1 includes some sort of control means for controlling so as to make the scale-plate lighting device 3 and the pointer lighting device 5 be turned off along with turning-off of the ignition key 10.

In light of this point, when putting the statements of the above-mentioned a to e, and the statements of FIG. 2 together, it is recognized that the following invention is described in Evidence A No. 1.

"An instrument for a vehicle, comprising:

a scale plate 2; a light emitting pointer 4 to perform indication display on the scale plate 2; a scale-plate lighting device 3 to perform transmitted illumination of the scale plate 2; a pointer lighting device 5 to irradiate the light emitting pointer 4 by light to make the light emitting pointer 4 emit light; and

a control means for performing control so as to make the scale-plate lighting device 3 and the pointer lighting device 5 be turned off along with turning-off of an ignition key 10." (Hereinafter, referred to as "Cited invention 1")

(2) Well-known arts described in Evidence A No. 2 to Evidence A No. 7

A Evidence A No. 2

According to the statements of page 1, lower right column, lines 8-10, and page 1, lower right column, line 18 to page 2, upper left column, line 18 of Evidence A No. 2, there is disclosed in Evidence A No. 2 a room light lighting circuit in a room light (including a key illumination lamp) of a passenger vehicle, which is configured to make brightness of the room light be reduced gradually when a door of the vehicle is closed, causing a romantic feeling.

B Evidence A No. 3

According to statements of paragraphs [0001]-[0004], [0012], and [0019] of

Evidence A No. 3, there is disclosed in Evidence A No. 3 a technology that aims at exerting an effect that, by softly lowering a light quantity of an illumination lamp at the time of inhibiting a delay operation of turning-off of a vehicle interior illumination lamp such as a room lamp, a key cylinder illumination lamp, and a foot illumination lamp and at the time of end of a delay operation, a feeling of digital control is eliminated and the illumination lamp is turned off in a natural fashion.

C Evidence A No. 4

According to statements of paragraphs [0001], [0002], [0005], [0007], [0009], [0024]-[0026], and [0028] of Evidence A No. 4, there is disclosed in Evidence A No. 4 that, in an illumination device for a vehicle to illuminate a lower portion in a side of a vehicle body, a light emitting part reduces light gradually to making a user feel better by performing turning-off of a light using a discharge phenomenon of a capacitor.

D Evidence A No. 5

According to statements of paragraphs [0001], [0008], [0009], [0012], [0013], [0031], and [0032] of Evidence A No. 5, there is disclosed in Evidence A No. 5 that, in an electric-discharge lamp lighting device to make an HID lamp (high pressure electric-discharge lamp) for use in a vehicle light up, it is possible to make the electric-discharge lamp become gradually dark at the time of turning a power switch off by keeping the electric-discharge lamp in a state capable of lighting even after turning the power switch off, and reducing an emission amount of the electric-discharge lamp gradually until turning-off is reached, thereby reducing a psychological load of a driver and a passenger of an oncoming vehicle that comes with sharp turning-off of a head light and the like when a high pressure electric-discharge lamp such as an HID lamp is used as a head light and the like of a vehicle.

E Evidence A No. 6

According to statements of paragraph [0001]-[0004] of Evidence A No. 6, there is disclosed in Evidence A No. 6 that, conventionally, in a room lamp turning-off control device to control turning-off of a room lamp at the time such as when a door is closed, a room lamp control device that turns off a room lamp gradually, without immediately turning off the room lamp when a door is closed, after taking a certain amount of time is used for a lot of automobiles, and, in addition, to make brightness be reduced gradually is generally called "fade-out."

F Evidence A No. 7

According to statements of paragraphs [0001]-[0003] of Evidence A No. 7, there is disclosed in Evidence A No. 7 that, conventionally, in a lighting device for use in a room of a residential house, for example, when an incandescent lamp is turned off, for example, dimming lighting is performed to produce some atmosphere by making the lamp be gradually dark from the lighting state to the turned-off state (fade-out).

G Summary

As above, when respective technical matters described in Evidence A No. 2 to Evidence A No. 7 are put together, it is possible to recognize the following well-known art. "When turning off a room light, a key cylinder illumination lamp, a foot illumination lamp, and a head light that are illumination related to a vehicle and a residential illumination lamp, it is a well-known art that is generally called fade-out to control luminance of irradiation light so as to make it be lowered gradually, and, here, it is also well known that some sort of psychological effect would be exerted by fade-out." (Hereinafter, referred to as "Well-known art 1")

(3) The technology described in Evidence A No. 8

A Described matters

In Evidence A No. 8, there are the following statements.

a "(Industrial Application Field)

The present device relates to, in a vehicle such as an automobile, a meter-for-vehicle lighting control circuit in which, even after turning-off of a head lamp, meters such as a speed meter disposed on an instrument panel are made to continuously light up for a certain period of time." (page 1, left column, lines 11-15)

b "(Conventional Art)

Conventionally, it is arranged such that illumination of such meter is turned on or turned off in conjunction with a head lamp. Accordingly, when driving an automobile such as from nighttime to early morning, and when the surroundings becomes bright at dawn and the head lamp is turned off, illumination of the meters is turned off simultaneously. On this occasion, brightness of the meters abruptly changes, and, therefore, there is a problem point that the visibility of the meters degrades on a temporary basis until the eyes become accustomed to the brightness change." (page 1, left column, lines 16-25)

c "(Object of the Device)

The present device has been made to solve the above-mentioned conventional problem point, and its object is to secure visibility of meters immediately after turning-off of a head lamp, by making the meters continuously light up for a certain period of time after turning-off of a head lamp while reducing light, and thereby making illumination of the meters change gradually so as to allow the eyes to get accustomed to the brightness change." (page 1, left column, lines 26 to right column, line 4)

d "Therefore, at the time when the switch SW has come to the OFF state, the illumination lamp L is made to continuously light up for a certain period of time in a light reduction state, in which light intensity is low, at a voltage of 5 V that is lower than a voltage of 14 V to be applied at the time of lighting up of the head lamp. Note that, in a light reduction state, the value of voltage V of the voltage regulator VR and the ratio of the resistors R6 and R7 are set in a manner satisfying the relation VZD>R7/R6+R7V so as to prevent a voltage applied to the illumination lamp L; that is, to the detection circuit 3, from exceeding zener voltage VZD of the zener diode ZD.

B After the lapse of a predetermined time, when charging of the capacitor C1 is completed, the base current flows to the base of the transistor Q2 to make the transistor come to the ON state, and the base of the transistor Q3 is grounded through the collector and the emitter of the transistor Q2 to make the transistor Q3 come to the OFF state. Along with this, since the base current stops to flow to the base of the transistor Q4, the transistor Q4 also comes to the OFF state and a voltage of 5 V of the voltage regulator VR side comes not to be added to the illumination lamp L, causing the illumination lamp L to be turned off. Therefore, the illumination lamp L lights up in a light reduction state for just a certain period of time after the switch SW has come to the OFF state and then it is turned off." (page 3, left column, line 40 to right column, line 20)

e "(Advantage of the Device)

The present device is composed of the above-mentioned constitution and action, and, in the present device, turning-off of a head lamp is detected by a detection circuit, and, when turning-off of the head lamp is detected by the detection circuit, illumination lamps of meters are made to continuously light up for a predetermined amount of time in a state that light is reduced than that of a usual state by an illumination continuation circuit, and, consequently, on the occasion of driving from nighttime to early morning, even when the surroundings becomes bright at dawn and the head lamp is turned off, illumination of the meters such as a speed meter is not turned off simultaneously, but instead their brightness is gradually changed to prevent the meters from becoming hard to read. Therefore, it is possible to secure visibility of the meters immediately after turning-off of the head lamp." (page 3, right column, lines 21-33)

B Publicized prior art

According to statements of the above-mentioned described matters a-e, and Fig. 1 and Fig. 2, it is acknowledged that the following technology is described in Evidence A No. 8.

"A meter-for-vehicle lighting control circuit in which, in order to secure visibility of reading meters immediately after turning-off of a head lamp, at the time when the head lamp is turned off when illumination lamps of the meters are lighting at usual brightness along with turning-on of the head lamp, control is carried out in such a manner that the illumination lamps are made to continuously light for just a predetermined amount of time in a state that light is reduced from usual and is turned off after that, and, by this, on the occasion of driving from nighttime to early morning, for example, even when the surroundings becomes bright at dawn and the head lamp is turned off, illumination of the meters is not turned off simultaneously, but instead their brightness is gradually changed to prevent the meters from becoming hard to read." (hereinafter, referred to as "Publicized prior art 1")

(4) The technology described in Evidence A No. 9

A Described matters

In Evidence A No. 9, there are the following statements.

"[0009] When the key switch 4 of a vehicle is made to be in the ACC position from the OFF position, power is supplied to the power circuit 6a from the battery 5 via the accessory power terminal 4b to activate the power circuit 6a, and direct-current voltage is supplied to the instrument lighting circuit 9. The instrument lighting circuit 9 outputs alternating-current voltage and applies the voltage to the electric-discharge lamp 3a for an instrument, and the instrument electric-discharge lamp 3a lights up to illuminate the instrument whole portion 3 such as scales and letters.

[0010] Further, when the key switch 4 is made to be in the ON position from the ACC position, power is supplied to the power circuit 6b from the battery 5 via the ignition power terminal 4a to activate the power circuit 6b, thereby supplying direct-current voltage to the pointer lighting circuit 7. The pointer lighting circuit 7 outputs alternating-current voltage to apply the voltage to the pointer electric-discharge lamp 2a, and the pointer electric-discharge lamp 2a lights up to illuminate the pointer 2.

[0011] In this way, since it is made such that the instrument electric-discharge lamp 3a that

illuminates the instrument whole portion 3 is connected to the accessory power terminal 4b of the key switch 4, and the pointer electric-discharge lamp 2a that illuminates the pointer 2 is made to be connected to the ignition power terminal 4a of the key switch 4, the instrument electric-discharge lamp 3a and the pointer electric-discharge lamp 2a are made to light in turn with just a temporal difference between the time when the key switch 4 is operated from the OFF position to the ACC position and the time when it is operated further to the ON position, thereby enabling elimination of a timer that was conventionally needed for having a temporal difference in lighting. In addition, a crew of a vehicle can recognize that, if only the instrument whole portion 3 is illuminated, the key switch 4 for vehicle is in the ACC position, and, if the pointer 2 and the instrument whole portion 3 are both illuminated, the key switch 4 is in the ON position."

B Publicized prior art

From the above statements, it can be read that, when a key switch of a vehicle is made to be in the ACC position from the OFF position, an electric-discharge lamp for an instrument lights up, and, after that, when the key switch is made to be in the ON position from the ACC position further, an electric-discharge lamp for a pointer lights up.

In the meantime, the key switch of a vehicle passes the ACC position certainly when the engine is activated; that is, when it is made to come to the ON position from the OFF position, and it is similar when, adversely, the engine is stopped; that is, when it is made to come to the OFF position from the ON position.

Therefore, in Evidence A No. 9, it is acknowledged that there is described the following technology.

"An instrument-for-vehicle lighting device in which, at the time of a key-off, first, illumination of a pointer is turned off, and then, illumination of an instrument plate is turned off; that is, timing of turning-off of the illumination of the pointer and timing of turning-off of the illumination of the instrument plate are made to be shifted." (Hereinafter, referred to as "Publicized prior art 2")

4 Judgment on Invention 1

First, Invention 1 will now be discussed below.

(1) Comparison

A Invention 1 and Cited invention 1 will be compared for each primary constituent component.

"The scale plate 2," "the light emitting pointer 4," "the scale-plate lighting device

3," "instrument for a vehicle," and "the ignition key 10" in Cited invention 1 respectively correspond to "the scale plate (20)," "the pointer (30)," "the irradiation means (50)," "the pointer device for a vehicle," and "the key switch of a vehicle (IG)" in Invention 1.

In addition, in light of the above-mentioned corresponding relationships, "a control means for performing control so as to make the scale-plate lighting device 3 and the pointer lighting device 5 be turned off along with turning-off of an ignition key 10" in Cited invention 1 and "control means (112, 112A, 113, 113A, 121-124, 130, 130A) for controlling luminance of irradiation light of the scale plate irradiation means so as to be lowered gradually when a key switch (IG) of the vehicle is turned off" in Invention 1 are common in a point of being "control means for controlling in such a way that, along with turning-off of a key switch of a vehicle, the scale plate irradiation means is made to be turned off" together.

B In view of the above, corresponding features and different features between the two are as follows.

(Corresponding feature 1)

"A pointer device for a vehicle, comprising: a scale plate; a pointer to perform indication display on the scale plate; irradiation means for irradiating the scale plate with light; and control means for controlling in such a way that the scale plate irradiation means is turned off along with turning-off of a key switch of the vehicle."

(Different feature 1)

A point that, with respect to control means for controlling so as to make light be turned off along with turning-off of a key switch of a vehicle, control is performed in the Invention 1 in a manner making luminance of irradiation light be gradually lowered, whereas, in Cited invention 1, control is performed in such a way that just turning-off is made.

(2) Judgment

The above-mentioned Different Feature 1 will be examined below in view of Wellknown art 1 and Publicized prior art 1 alleged by Demandant and common general technical knowledge and the like.

A Well-known art 1

Well-known art 1 will be described again.

22 / 30

"When turning off a room light, a key cylinder illumination lamp, a foot illumination lamp, and a head light that are illumination related to a vehicle and a residential illumination lamp, it is a well-known art that is generally called fade-out to control luminance of irradiation light so as to make it be lowered gradually, and, here, it is also well known that some sort of psychological effect would be exerted by fade-out."

(A) Examination 1

As described above, Well-known art 1 relates to fade-out to control in such a way that luminance of irradiation light is made to be lowered gradually at the time when a room light, a key cylinder illumination lamp, a foot illumination lamp, and a head light or a residential illumination lamp is turned off. Then, first, when a room light and a residential illumination lamp are examined, these are aimed at psychological effect of fade-out for a person such as a crew member, by making brightness of the environment around the person; that is, the brightness of the whole ambient atmosphere, be lowered gradually, and, thus, a visual contact target is not specified. This is similar to a foot illumination lamp, a key cylinder illumination lamp, and a head light, although a range of illumination is limited compared with a room light and a residential illumination lamp.

In contrast to this, Invention 1 has a technical feature in a point that, by "comprising control means (112, 112A, 113, 113A, 121-124, 130, 130A) for controlling luminance of irradiation light of the scale plate irradiation means so as to be lowered gradually when a key switch (IG) of the vehicle is turned off" (claim 1) in a pointer device for a vehicle, it exerts an effect that "brightness of a scale plate is gradually lowered after the key switch is turned off, and, therefore, novel visibility in this type of pointer device after the key switch is turned off can be provided to a crew." (the aforementioned "2 (2) Regarding Invention 1"), and the visual contact target is specified to be a scale plate of a pointer device that needs to be paid attention to during driving.

In view of the above, it can be said that Invention 1 in which a visual contact target, whose brightness can be recognized as being gradually lowered, is specified as a scale plate, and novel visibility of a pointer device for a vehicle after a key switch is turned off is achieved, and Well-known art 1 that aims at exerting a fade-out effect by controlling, when a room light, a key cylinder illumination lamp, a foot illumination lamp, a head light, and a residential illumination lamp are turned off, luminance of an irradiation light in a manner making it be lowered gradually are common in a point that control is performed in such a way that luminance of an irradiation light is made to be lowered gradually. However, technical significance of controlling in such a way that luminance of irradiation light is made to be lowered gradually is significantly different between the two.

Therefore, it is not possible to apply Well-known art 1 concerning fade-out light reduction to Cited invention 1 that just includes a control means for controlling in such a way that the scale-plate lighting device 3 and the pointer lighting device 5 are just made to be turned off along with turning-off of the ignition key 10.

(B) Examination 2

In addition, although Cited invention 1 is an invention that "includes a control means for performing control so as to make the scale-plate lighting device 3 and the pointer lighting device 5 be turned off along with turning-off of an ignition key 10," an instrument for a vehicle described in Evidence A No. 1 intends, as indicated in the above "3 (1) A a, c and e," to maintain a blackout effect; that is, an effect that, when an ignition key is turned off, the whole surface of an instrument for a vehicle comes to be in total darkness, and, thus, it is understood as, after turning-off of the ignition key, immediate turning-off of the scale-plate lighting device 3 and the pointer lighting device 5 is required.

In view of the above, even if the fade-out light reduction that makes luminance of an irradiation light be lowered gradually on the occasion when illumination related to a vehicle and the like is turned off is well-known as Well-known art 1, it can be also said that there is disincentive in applying it to Cited invention 1 in which turning-off of the scaleplate lighting device 3 and the pointer lighting device 5 is required immediately after turning-off of the ignition key.

B Regarding Publicized prior art 1

(A) Examination 1

Publicized prior art 1 will be described again.

"A meter-for-vehicle lighting control circuit in which, in order to secure visibility of reading meters immediately after turning-off of a head lamp, at the time when the head lamp is turned off when illumination lamps of the meters are lighting at usual brightness along with turning-on of the head lamp, control is carried out in such a manner that the illumination lamps are made to continuously light for just a predetermined amount of time in a state that light is reduced from usual and is turned off after that, and, by this, on the occasion of driving from nighttime to early morning, for example, even when the surroundings become bright at dawn and the head lamp is turned off, illumination of the meters is not turned off simultaneously, but instead their brightness is gradually changed to prevent the meters from becoming hard to read."

Since Publicized prior art 1 is for the purpose of, as described above, securing

visibility of meters immediately after turning-off of a head lamp, and, even immediately after turning-off of a head lamp, driving of the vehicle is continued unless the ignition key is turned off, it can be said that it is a technology on the premise that visibility for reading the meters is required in succession to this. For this reason, it is a technology in which, after turning-off of a head lamp, an illumination lamp of meters is made to continuously light in a light-reduced state from usual for a predetermined amount of time needed for a crew to become accustomed to brightness.

In addition, Cited invention 1 is as mentioned in (3 (1) B) above, and Well-known art 1 is as mentioned in (A (A)) above.

In view of the above, although it can be said that Cited invention 1 and Publicized prior art 1 are common in a point to control to turn off illumination of instruments and meters for a vehicle, triggers for turning-off are different from each other, as turning-off of an ignition key and turning-off of a head lamp.

Therefore, it can be said that there is disincentive in applying Publicized prior art 1 that has a different trigger for turning off light to Cited invention 1.

(B) Examination 2

In Publicized prior art 1, there is a statement that "illumination of the meters is not turned off simultaneously, but instead their brightness is gradually changed," and a word "gradually" that is the same as that used in Invention 1 is used. Then, this will be examined below.

Generally, "gradually" means "a condition changing gently," "a condition changing little by little" (Kojien, the fifth edition), and, in a meter-for-vehicle lighting control circuit described in Evidence A No. 8, an illumination lamp changes in a stepwise manner from usual lighting --> light-reduced lighting for a predetermined amount of time --> turning off (refer to the aforementioned "(3) A d, e"), and, therefore, the meaning of "gradually" according to Publicized prior art 1 is different from the essential meaning included in "gradually."

In contrast to this, Invention 1 is, as instructed in the above-mentioned "2 (2) Regarding Invention 1," focused on novelty of visibility after a key switch is turned off; in other words, at the time when a vehicle has been stopped, and a pointer device no longer needs to be read, and it includes control means for performing control to make luminance of irradiation light of scale plate irradiation means be lowered gradually along with turning-off of a key switch of a vehicle for this purpose. Therefore, "gradually" according to the Invention 1 is understood as meaning "a condition changing gently" and "a condition

changing little by little" in its essential meaning.

Therefore, it can be said that Invention 1 and Publicized prior art 1 have substantially different meanings in a point that luminance concerning a pointer device and meters is lowered gradually.

C Demandant's allegation

a Demandant alleges that, according to statements of Evidence A No. 11, it is obvious that an incandescent bulb is used as illumination of a scale plate for a vehicle conventionally, and, according to statements of Evidence A No. 5, it was common general technical knowledge at the time of the Patent application that, in a scale plate for a vehicle in which an incandescent bulb was used, brightness is gradually changed necessarily at the time of turning off the light. This will be examined here.

b Evidence A No. 5

In Evidence A No. 5, there are described the following matters.

"[0007]

[Problem to be solved by the invention]

In the above-mentioned electric-discharge lamp lighting device, when the power switch S is turned off in a state that the electric-discharge lamp DL is lighting, the electric-discharge lamp DL turns off several milliseconds or less after turning-off of the power switch S as shown in FIG. 10. Here, a delay time after turning-off of the power switch S to turning-off of the electric-discharge lamp DL is caused by electric charge charged in the capacitor C2. In addition, when the electric charge charged in the capacitor C2 lowers to less than or equal to the operation voltage of such as a control circuit of the inverter circuit A to cause the operation of the control circuit to be stopped, discharge of the electric-discharge lamp DL is stopped, and the emission amount becomes 0 at once. [0008]

In the meantime, since emission is thermoluminescence in an incandescent bulb, the incandescent bulb continuously lights during a period until the temperature of the filament is lowered to a fixed value as shown in FIG. 11 even though the power is cut off, and the so-called afterglow phenomenon is caused.

Generally, since a reaction of a human eye is made in the order of 10 msec, when a light is turned off at once as is the case with the electric-discharge lamp lighting device described above, a reaction of a large differential value is given to the human eye. When such electric-discharge lamp lighting device is used in a case where a head light and the

like for a vehicle are made to light, a sudden visual change is given to a driver and an oncoming vehicle and the like to add a psychological burden, and, further, there is a risk of occurrence of a safety problem. On this point, when an emission amount is changed as with an incandescent bulb and the like, illumination gradually becomes dark, not causing a problem as described above."

Furthermore, similarly, according to FIG. 11 of Evidence A No. 5 that is an explanation diagram of the light emission property of an incandescent bulb at the time of power-off, it is shown that afterglow is 100 msec.

c Examination

When examination is made, although it is described in Evidence A No. 5 that an incandescent bulb has 100 msec of afterglow, this is about a vehicle head light using an incandescent bulb.

On the one hand, an incandescent bulb for use in meters has an emission amount incomparably small compared with that for use in a head light, and, therefore, an incandescent bulb for use in meters has a time constant that is fairly small compared with that of an incandescent bulb to be used in a head light. From this, the afterglow time of such incandescent bulb should be smaller to a large degree in comparison with 100 msec.

Then, generally, the time resolution of the human eye is said to be of a degree of about 50-100 msec, blinking of light shorter than such time is perceived as if it is continuously lighting.

Therefore, when an incandescent bulb is used as irradiation means for a scale plate, it is recognized that, even if luminance of irradiation light of the bulb is lowered along with power-off, its afterglow time would be incomparably smaller than 100 msec, and, consequently, it should be concluded that it is impossible for a crew to visually recognize the degree of that attenuation at all. In other words, also by the statements of Evidence A No. 11 and Evidence A No. 5, it cannot be said that it was common general technical knowledge at that time of the Patent application that, in a scale plate for vehicle in which an incandescent bulb was used, brightness of the scale plate was changed gradually to a degree capable of being visually recognized by a crew on the occasion of turning-off of a light.

In contrast, Invention 1 performs control, for the purpose of providing novel visibility in a pointer device to a crew after a key switch is turned off, in a manner making luminance of irradiation light of a scale-plate irradiation means be lowered gradually, and its specific control means is that the microcomputer 80 controls driving of the light source 50 following the flow chart shown in FIG. 4 of the Description, etc. so as to make the light

emitting luminance Y of irradiation light of the scale plate irradiation means be lowered according to $Y=A\{1-(t/T)\}$ (the aforementioned "2 (2) Regarding Invention 1"). In this way, with respect to time T that specifies a rate of lowering luminance of light emission, although there is no statement about its specific numerical value in the Description, etc., it is natural to understand that the time of the above-mentioned T is a time of a degree that a crew can visually recognize as seen from the object and the effect of the Invention 1 described in the Description, and, therefore, it should be construed that "to make luminance of irradiation light be lowered gradually" stated in Invention 1 is to make luminance of irradiation light be lowered gradually to a degree that a crew can visually recognize.

d Summary

As above, at the time of the Patent application, even if it was common general technical knowledge to use an incandescent bulb for illumination of meters, it cannot be said that it was common general technical knowledge that luminance is lowered gradually to the degree that a crew can visually recognize after power-off, and, also, it cannot be said that "to make luminance of irradiation light be lowered gradually" according to Invention 1 is suggested by such common general technical knowledge.

D Summary

As stated above, even based on the above-mentioned common general technical knowledge, it cannot be said that it is possible to apply Well-known art 1 and Publicized prior art 1 to Cited invention 1.

Therefore, it cannot be said that Invention 1 could have been invented with ease by a person skilled in the art based on Cited invention 1, Well-known art 1, and Publicized prior art 1 and the common general technical knowledge.

5 Judgment on Inventions 2, 3

(1) Regarding Invention 2

A Invention 2

Invention 2 is as described in the aforementioned "1 (2) Invention 2," and it is an invention in which, in Invention 1, "pointer irradiation means" is newly included, and the control means is configured to control luminance of irradiation light of the scale plate irradiation means and luminance of irradiation light of the pointer irradiation means so as to be respectively lowered gradually.

B Comparison

Invention 2 and Cited invention 1 will be compared.

Since "the pointer lighting device 5" of Cited invention 1 corresponds to "the pointer irradiation means (31)" of Invention 2, when comparing after the fashion of the aforementioned "4 (1) Comparison," a corresponding feature and different features are as follows.

(Corresponding feature 2)

"A pointer device for a vehicle, comprising: a scale plate; a light emitting pointer to perform indication display on the scale plate; scale-plate irradiation means to irradiate the scale plate by light; and pointer irradiation means to make the light emitting pointer emit light by irradiating light to the light emitting pointer, the pointer device for a vehicle further comprising

control means for controlling the scale plate irradiation means and the pointer irradiation means so as to be turned off when a key switch (IG) of the vehicle is turned off." (The different feature 2)

A point that, regarding a control means for controlling so as to make an irradiation light be turned off along with turning-off of a key switch of a vehicle, control is performed, in Invention 2, in such a way that luminance of the irradiation light is made to be lowered gradually, whereas Cited invention 1 remains in just controlling so as to make the light be turned off.

C Judgment

The content of the above Different Feature 2 is the same as that of the different Feature 1 examined regarding Invention 1. Therefore, as with the judgment made to Invention 1, it cannot be said that also Invention 2 could have been invented by a person skilled in the art with ease based on Cited invention 1, Well-known art 1, Publicized prior art 1, and the common general technical knowledge.

(2) Invention 3

Invention 3 is as described in the aforementioned "1 (3) Invention 3," and is an invention that limits, in Invention 2, a point that a rate of luminance lowering of respective pieces of irradiation light are made to differ from each other.

Then, Well known art 2 additionally raised by Demandant as a reason that Invention 3 is easily conceivable is "An instrument-for-vehicle lighting device in which, at the time of a key-off, first, illumination of a pointer is turned off, and then, illumination of an

instrument plate is turned off; that is, timing of turning-off of the illumination of the pointer and timing of turning-off of the illumination of the instrument plate is made to be shifted." (the aforementioned "3 (4) The technology described in Evidence A No. 9 B"), and it remains in just disclosing an instrument-for-vehicle lighting device in which the timing of turning-off of illumination of a pointer and the timing of turning-off of illumination of an instrument plate are shifted from each other.

Therefore, as with the judgments about Invention 1 and Invention 2, it cannot be said that Invention 3 could have been invented by a person skilled in the art with ease based on Cited invention 1, Well-known art 1, Publicized prior art 1, Publicized prior art 2, and the common general technical knowledge.

No. 5 Closing

As described above, the reasons of the demand for trial and the means of proof alleged by Demandant cannot lead to the conclusion that Patent 1, Patent 2, and Patent 3 were patented in breach of the provisions of Article 29(2) of the Patent Act.

Accordingly, it may not be concluded that Patent 1, Patent 2, and Patent 3 should be invalidated under the provisions of Article 123(1)(ii) of the Patent Act.

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

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

Apr. 26, 2013

Chief administrative judge: IINO, Shigeru

Administrative judge: SEKINE, Hiroyuki

Administrative judge: KOBAYASHI, Norifumi