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Datasheet for the decision of 4 December 2007

Case Number: T 1402/05 - 3.4.03

Application Number: 00106337.9

Publication Number: 1039338

IPC: G03B 42/04

Language of the proceedings: EN

Title of invention:
Cassette for stimulable phosphor sheet, identification means therfor, and image information reading apparatus

Applicant:
FUJIFILM Corporation

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 1402/05 - 3.4.03

D E C I S I O N
of the Technical Board of Appeal 3.4.03
of 4 December 2007

Appellant: FUJIFILM Corporation
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Minato-ku
Tokyo (JP)

Representative: Klunker . Schmitt-Nilson . Hirsch
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 20 May 2005 refusing European application No. 00106337.9 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: R. G. O'Connell
Members: V. L. P. Frank
T. Bokor

Summary of Facts and Submissions

I. This is an appeal from the refusal of application 00 106 337 for lack of inventive step (Article 56 EPC).

II. The appellant applicant requested that the decision under appeal be set aside and a patent granted on the basis of claims 1 and 2 filed as main request with the statement of grounds of appeal, or alternatively, on the basis of an auxiliary request in the form of a single claim 1 sent with a letter dated 26 October 2007.

III. Claim 1 of the main request reads:

"An image information reading apparatus comprising:

a cassette loading region (62a through 62d, 204) for removably loading a cassette (20, 180, 302) for housing a stimulable phosphor sheet (22),

a sheet feeder (66) for removing said stimulable phosphor sheet (22) from said cassette (20, 180, 302);

a reading unit (140) for reading radiation image information recorded in said stimulable phosphor sheet (22);

an erasure unit (138) for erasing remaining radiation image information from said stimulable phosphor sheet (22) after the radiation image information has been read by said reading unit (140); and

a sheet identifying assembly (134, 190, 308)

characterized in that

said stimulable phosphor sheet (22) is either a single-sided sheet (22a) for emitting light from a recording layer (38a) thereof when stimulating light is applied to the recording layer (38a) or a double-sided sheet (22b) for emitting light from opposite surfaces thereof when stimulating light is applied to a recording layer (38b) thereof,

that said sheet identifying assembly (134, 190, 308) is adapted for determining whether the stimulable phosphor sheet (22) housed in said cassette (20, 180, 302) loaded in cassette loading region (62a through 62d, 204) is either said single-sided sheet (22a) or said double-sided sheet (22b),

that said reading unit (140) comprises:

first light guiding means (148a) disposed on the side of said recording layer (38) of the stimulable phosphor sheet (22), for guiding the light emitted from the stimulable phosphor sheet (22); and

second light guiding means (148b) disposed on the reverse side (36) of the stimulable phosphor sheet (22) opposite to said recording layer (38), for guiding the light emitted from the stimulable phosphor sheet

(22) when said stimulable phosphor sheet (22) is the double-sided sheet (22b),

that said erasure unit (138) comprises:

a first erasing unit (164a) for applying erasing light to said recording layer (38) of the stimulable phosphor sheet (22); and

a second erasing unit (164b) for applying erasing light to the reverse side (36) of the stimulable phosphor sheet (22) opposite to said recording layer (38) when said stimulable phosphor sheet (22) is the double-sided sheet (22b), and

that control means (168) are provided for being supplied with an identification signal from said sheet identifying assembly (134, 190, 308) and turning on and off at least one of said second light guiding means (148b) and said second erasing unit (164b) based on said identification signal."

In the sole claim of the auxiliary request the following features were added to the sheet identifying assembly of claim 1 of the main request (the differences with respect to claim 1 of the main request have been marked by the board):

"that said sheet identifying assembly (134, 190, 308) is adapted for determining whether the stimulable phosphor sheet (22) housed in said cassette (20, 180, 302) loaded in cassette loading region (62a through 62d, 204) is either said

single-sided sheet (22a) or said double-sided sheet (22b), **and comprises**

an identification medium (34, 34a, 304) disposed on said cassette (20, 180, 302) housing at least said double-sided sheet (22b); and

reading means (132, 206, 306) disposed in said apparatus (60, 200, 300), for reading said identification medium (34, 34a, 304) to determine whether said stimulable phosphor sheet (22) is either said single-sided sheet (22a) or said double-sided sheet (22b)"

IV. The following prior art documents *inter alia* were cited in the examination procedure:

D2: US 4 960 994 A

D3: US 5 534 710 A

V. The appellant applicant argued essentially as follows:

– According to the characterizing part of the claim, the identification signal supplied by the control means turned on and off the second light guiding means and/or the second erasing unit based on the kind of stimulable phosphor sheet used. Therefore, a single—sided sheet would be handled differently from a double—sided sheet by the image information reading apparatus.

– Document D3 disclosed in general the use of double–sided phosphor sheets and, in particular, an apparatus for and a method of reading such double–sided phosphor sheets. The apparatus of D3 comprised first and second light guiding means and first and second erasing units disposed on opposite faces of the phosphor sheet. However, according to D3, both light guiding means were always used to collect light emitted from the phosphor sheet and both erasing units were always turned on during the erasing step. Therefore, if D3 were to be combined with D2, the image information reading apparatus having the features of the patent claim would not result, since such a combined apparatus would always turn on both light guiding members and both erasing units. Treating single- and double sided phosphor sheets differently was therefore not suggested by the prior art. The skilled person would have realized that the apparatus disclosed in document D3 was suitable for reading both single- and double-sided radiation image storage panels. He would therefore have employed the conventional apparatus without modifying it.

Reasons for the Decision

1. The appeal is admissible.

2. The sole claim of the auxiliary request is a combination of claims 1 and 2 of the main request. As mentioned under point III above, it adds the features of an identification medium and corresponding reading means to the sheet identifying assembly specified in the main request. Any finding of lack of inventive step of the apparatus according to the auxiliary request would therefore apply *a fortiori* to the apparatus of the main request, as the subject-matter of the latter includes that of the former. This being the case, the reasoning can begin with the auxiliary request.

3. *Auxiliary request – Inventive step (Article 56 EPC)*

3.1 It is common ground that document D2 discloses an image information reading apparatus for single-sided phosphor sheets with the features of the preamble of claim 1 (column 1, lines 29 to 47; column 2, line 60 to column 3, line 17).

3.2 The image information reading apparatus of the claim differs therefore from the one disclosed in D2 in that:

(a) the sheet identifying assembly is adapted for determining whether the phosphor sheet housed in the cassette is either a single-sided or a double-sided phosphor sheet (although D2 discloses a memory disposed on the cassette and corresponding reading means disposed in the apparatus, they are not adapted to distinguish between single- and

double-sided phosphor sheets, as D2 only discloses single-sided phosphor sheets (column 2, lines 22 to 29));

(b) second light guiding means and second erasing means are disposed on the reverse face of the phosphor sheet; and that

(c) control means are provided for receiving an identification signal from the sheet identifying assembly and for turning on and off said second light guiding and/or erasing means on the basis of this signal.

3.3 To the uninitiated, the term "double-sided phosphor sheets" may appear slightly misleading, as these sheets do not comprise two phosphor layers on opposite faces of the supporting substrate, but are formed by a single phosphor layer on a transparent substrate so that the light emitted by the phosphor layer can be collected from both sides of the sheet. Therefore the difference between single- and double-sided phosphor sheets is that in the former case the substrate is opaque and in the latter transparent enabling the same latent image to be read from both sides (see eg D3, column 2, lines 27 to 39 and [0006] to [0008] of the published patent application).

3.4 The technical problem addressed by the present invention is therefore to modify the image information reading apparatus disclosed in document D2 so that it can handle so-called single-sided and double-sided phosphor sheets.

3.5 Document D3 discloses an image information reading apparatus for double-sided phosphor sheets comprising first and second light guiding means 15a and 15b as well as first and second light erasing means 20 located on opposite sides of the phosphor sheet (Figure 1; column 2, line 39 to column 3, line 10). The skilled person learns from the disclosure of D3 that for reading and erasing double-sided phosphor sheets a second light guiding unit and a second erasing unit have to be provided on the opposite side of the phosphor sheet and would incorporate such units into the apparatus disclosed in D2.

3.6 The appellant applicant argued that the apparatus of D3 was suitable for handling both types of sheets, since the presence of the second light guiding and erasing units did not prevent the handling of single-sided phosphor sheets. There was therefore no need to modify the apparatus of document D2, as an apparatus suitable for reading both kinds of sheets was already available.

3.7 The board is however not persuaded by this argument, as document D2 discloses that for processing single-sided phosphor sheets second light guiding and erasing means are not required. Moreover, straightforward cost and energy saving considerations require that those energy consuming parts of an apparatus which are not required for a given task be switched off whenever possible. Thus the skilled person would switch off the second units disclosed in D3 when handling single-sided phosphor sheets absent special reasons for keeping them switched on (eg for avoiding temperature variations within the apparatus or for reducing the lamp's warm-up

period when processing a double-sided phosphor sheet after having processed a single-sided one).

3.8 When both types of phosphor sheets are processed by a single apparatus having different settings according to sheet type the need arises to distinguish between cassettes holding different types of phosphor sheets. Document D2 discloses a sheet identifying assembly comprising a memory 3, ie an identification medium, attached to a predetermined position of the cassette and reading means disposed on the apparatus for reading the information contained in the memory (column 4, lines 59 to 63). D2 discloses further that the memory 3 stores *inter alia* the type of the photographic material contained in the cassette (column 6, lines 16 to 21). The skilled person would therefore also store in the memory 3 information about the type of phosphor sheet contained in the cassette, ie whether it is single-sided or double-sided, when using both types of sheets and would use this information to control the switching on and off of the second light guiding and erasing means. In fact, their choice would probably be guided by the desire to obtain optimal images and optimal erasures, and less by the desire to use unchanged an available optical system. Therefore the skilled person would have no inhibitions about actively varying the illumination on the two sides of the phosphor sheet.

3.9 It is therefore the judgement of the board that the information reading apparatus of the claim of the auxiliary request does not involve an inventive step.

4. As stated under point 2 above, this conclusion implies that the subject-matter of claim 1 of the main request, which subsumes that of claim 1 of the auxiliary request, also lacks an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

Registrar Chair

S. Sánchez Chiquero R. G. O'Connell