

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte YUJIRO SUZUKI,  
YUJI AOKI,  
AKIO UMEMOTO,  
and  
MASAMICHI ITABASHI

---

Appeal No. 1998-2188  
Application No. 08/581,424

---

HEARD: NOVEMBER 15, 2000

---

Before THOMAS, HAIRSTON, and JERRY SMITH, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 2 and 4 through 10.

The disclosed invention relates to a protective layer provided on a fluorescent layer in a radiographic intensifying screen.

Appeal No. 1998-2188  
Application No. 08/581,424

Appeal No. 1998-2188  
Application No. 08/581,424

Claim 8 is the only independent claim on appeal, and it reads as follows:

8. A radiographic intensifying screen, comprising:

a) a support;

b) a fluorescent layer on the support; and

c) a protective layer on the fluorescent layer, comprising:

on i) an organic macromolecule resin film provided the fluorescent layer, and

ii) a film-forming resin layer on the organic macromolecule resin film, comprising a polysiloxane oligomer or a perfluoroalkyl oligomer,

comprises wherein the film-forming resin layer a resin which is different from the resin of the organic macromolecule film.

The references relied on by the examiner are:

Kano et al. (Kano)	4,741,993	May 3, 1988
Takasu et al. (Takasu)	5,227,253	Jul. 13, 1993

Claims 2 and 4 through 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kano in view of Takasu.

Reference is made to the briefs and the answer for the respective positions of the appellants and the examiner.

OPINION

The obviousness rejection of claims 2 and 4 through 10 is reversed.

Takasu (Abstract) and the admitted prior art (specification, page 3) disclose the same resin having polysiloxane-structured oligomer and a perfluoroalkyl group-containing oligomer that is used as a protective layer on a phosphor/fluorescent layer in a radiation image storage panel and a radiation image conversion panel, respectively.

Kano uses at least two protective layers 13a and 13b to prevent moisture from reaching an underlying layer of phosphor 12 (column 3, lines 10 through 20). According to Kano, "a composite protective layer having the layer structure as shown in FIG. 1 may preferably have a very small water vapor transmission rate in the direction of from 13b to 13a and a relatively large water vapor transmission rate in the direction of from 13a to 13b by selecting suitable materials for the protective layers" (column 3, lines 41 through 47).

In framing the obviousness rejection, the examiner stated (Answer, page 4) that:

Appeal No. 1998-2188  
Application No. 08/581,424

With respect to claim 8: Kano *et al.* describes a radiographic panel having all the characteristic features of the claimed invention except a film-forming resin layer containing a polysiloxane structure-containing oligomer or a perfluoroalkyl group-containing oligomer (see at least figure 1). Takasu *et al.* describes a radiographic panel having an improved protective layer produced from a film-forming resin layer containing a polysiloxane structure-containing oligomer or a perfluoroalkyl group-containing oligomer (see at least the abstract). The improved protective layer of Takasu *et al.* is superior to a conventional protective layer because it produces a surface that exhibits a lower coefficient of friction and a higher resistance to abrasion (see column 11, lines 1-15, and column 12, lines 25-37). Thus, the skilled artisan would have found it obvious to substitute the improved protective layer of Takasu *et al.* for the second protective layer 13b of Kano *et al.* in view of its superior properties.

Appellants argue inter alia that there is a lack of a suggestion or motivation to combine the teachings of the references, and that the examiner has resorted to impermissible hindsight to demonstrate the obviousness of the claimed invention (Brief, Appendix II, page iii).

In response to appellants' arguments, the examiner indicates Answer, page 7) that:

In the modification of the panel of Kano *et al.*, the skilled artisan would have only changed the outermost protective layer so as not to lose the moisture protection attained by the two layers of

Appeal No. 1998-2188  
Application No. 08/581,424

Kano *et al.* Further, both the outermost protective layer of Kano *et al.* and the single protective layer [of] Takasu *et al.* are formed of a fluorocarbon film forming resin comprising polytetrafluoroethylene (see column 12, lines 8-9, of Kano *et al.*, and the sentence bridging columns 7 and 8 of Takasu *et al.*). Thus, the skilled artisan would have expected the modified panel of the combination to exhibit the moisture protection described by Kano *et al.* while also realizing the benefits of reduced coefficient of friction and increased resistance to abrasion described by Takasu *et al.* Hence, the examiner attests that appellants['] specification was **not** used as a guide to combine the prior art references in the right way so as to achieve the results of the claims. [Emphasis original.]

In light of Kano's express selection of two moisture-preventing layers that operate together to prevent moisture from reaching the underlying layer of phosphor, we do not agree with the examiner that the skilled artisan would have changed the outermost protective layer to some other material in the absence of evidence that it will function in exactly the same manner as the original moisture-preventing layer. Without such evidence, we agree with appellants (Brief, pages 5 and 6) that:

Indeed, Kano et al must have both of their protective layers in order to realize the moisture resistance necessary in their invention. Takasu et al disclose nothing about any moisture-resistance enhancing properties of their protective layer.

Appeal No. 1998-2188  
Application No. 08/581,424

Making the substitution suggested by the Examiner would defeat the express purpose of Kano et al by jeopardizing the moisture resistance therein.  
[Emphasis original.]

We likewise agree with the appellants (Reply Brief, page 2) that Kano discloses the use of polytetrafluoroethylene, whereas

Takasu "begins with an oligomer having a perfluoroalkyl group in combination with a film-forming resin such as polytetrafluoroethylene [emphasis original]."

In summary, the rejection is reversed because the examiner has not presented a prima facie case of obviousness.

DECISION

The decision of the examiner rejecting claims 2 and 4 through 10 under 35 U.S.C. § 103 is reversed.

REVERSED

JAMES D. THOMAS )  
Administrative Patent Judge )  
 )  
 )  
 )  
 ) BOARD OF PATENT  
KENNETH W. HAIRSTON )  
Administrative Patent Judge ) APPEALS AND

Appeal No. 1998-2188  
Application No. 08/581,424

)  
) INTERFERENCES  
)  
JERRY SMITH )  
Administrative Patent Judge )

KWH:hh

Appeal No. 1998-2188  
Application No. 08/581,424

OBLON, SPIVAK, MCCLELLAND, MAIER  
& NEUSTADT  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202