

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

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEROEN VAN ENGELSHOVEN, EDWIN A. MONTIE,
ADRIANUS H.E. VAN RIJSEWIJK and
JOHANNES TH. PEERLINGS

Appeal No. 1998-0335
Application 08/518,061

ON BRIEF

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

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 7-11. Claims 1-6 have been canceled, and claim 12 has been indicated to contain allowable subject matter. An amendment after final rejection was filed on March 31, 1997 but was denied entry by the

Appeal No. 1998-0335
Application 08/518,061

examiner.

Appeal No. 1998-0335
Application 08/518,061

The disclosed invention pertains to the field of picture display devices. An electron gun for generating at least one electron beam has a main lens system which is made up of a first electrode, a last electrode and at least one intermediate electrode. The intermediate electrode comprises a plurality of substantially identical plates.

Representative claim 7 is reproduced as follows:

7. A picture display device comprising an envelope containing an luminescent display screen and an electron gun for producing at least one electron beam for deflection across the display screen, said electron gun comprising a main lens system having a first electrode, a second electrode, and at least one intermediate electrode disposed between said first and second electrodes, each of said electrodes having at least one aperture for passing the at least one electron beam, said at least one intermediate electrode comprising substantially identical, conductive first and second plates and means for conductively attaching said plates to each other with the at least one aperture in the first plate aligned with the at least one aperture in the second plate.

The examiner relies on the following references:

Shimoma et al. (Shimoma)	4,935,663	June 19, 1990
Matsuda (abstract only)	JP 61-8832	Jan. 16, 1986

Claims 7-11 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Shimoma in view of

Appeal No. 1998-0335
Application 08/518,061

the Matsuda abstract. It should be noted that there is no record in this application that the full Matsuda document was ever considered by the examiner. In fact, the examiner has emphasized the fact that the rejection is based on the Matsuda abstract only [answer, pages 5-6]. We have obtained a translation of the full Matsuda document, and the translation is attached to this decision.

Rather than repeat the arguments of appellants or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of

Appeal No. 1998-0335
Application 08/518,061

skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claims 7 and 8. We reach the opposite conclusion with respect to claims 9-11. Accordingly, we affirm-in-part.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS

Appeal No. 1998-0335
Application 08/518,061

Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Passaic, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

With respect to independent claim 7, the examiner finds that Shimoma teaches all the features of claim 7 except for the intermediate electrode having a plurality of identical

Appeal No. 1998-0335
Application 08/518,061

plates. Matsuda is cited as teaching making the principal lens system electrode of an electron gun from a plurality of laminated plates. The examiner concludes that it would have been obvious to the artisan to form the intermediate electrode of Shimoma with a plurality of separate plates as taught by Matsuda [answer, pages 3-4].

Appellants argue that an intermediate electrode of Shimoma is constructed from a single, relatively thick plate of constant cross section along its thickness while the laminated electrodes of Matsuda are principal lens electrodes, rather than intermediate electrodes, and have a varying cross section along their thickness. Based on these differences, appellants assert that there is no possible motivation for replacing Shimoma's single plate electrode with a plurality of stacked identical plates [brief, pages 4-5].

We agree with the conclusion of the examiner. There is no question that Matsuda teaches that the focusing characteristics of a "principal" [abstract translation] lens system electrode can be improved by using laminated thin plates. This principal lens system is referred to as a "main" lens system in the attached translation. Therefore, the

Appeal No. 1998-0335
Application 08/518,061

Matsuda principal lens system of the Japanese abstract means the same thing as appellants' main lens system. The main lens system of these electron gun display devices are known to include an intermediate electrode as well as other electrodes [see background of the invention, page 1 of the specification]. Therefore, we agree with the examiner that the teachings of Matsuda would apply to any of the electrodes making up the main lens system.

The fact that the preferred embodiment of Matsuda uses plates which are not all identical does not diminish the relevant teachings of Matsuda. Matsuda is cited only for the teaching that multiple laminated thin plates can improve focusing characteristics over a single thick plate. Matsuda also teaches that the thin laminated plates are easier to manufacture than conventional thick electrodes [translation, pages 2-3]. Matsuda would have suggested to the artisan that any conventional thick plate electrode might be improved by using multiple laminated thin plates in addition to being easier to manufacture. Therefore, it would have been obvious to replace either of the thick plate intermediate electrodes

Appeal No. 1998-0335
Application 08/518,061

70 or 80 of Shimoma with equivalent laminated thin plates as taught by Matsuda. This modification would fully meet the invention as recited in claim 7. Therefore, we sustain the examiner's rejection of claim 7.

Independent claim 8 is similar to claim 7 except that claim 8 recites that the intermediate electrode has an odd number of apertured plates and that the plates on opposite sides of the center plate are substantially identical. The examiner relies on the same reasoning discussed above with respect to claim 7, and the examiner adds that the application disclosure admits that the number of plates is not critical [answer, page 4]. Appellants argue that there is no disclosure of an odd number of plates which permits the plates on opposite sides of the center plate to be reversed to compensate for imperfections on the plates caused by assembly [brief, pages 5-6].

Although we do not favor the examiner's reliance on "admissions" from the disclosure which are not related to the discussion of the prior art, we nevertheless agree with the conclusion reached by the examiner. The teaching of a plurality of laminated plates in Matsuda does not impose any

restrictions on the number of such plates. Matsuda indicates that the number of plates can be changed [translation, pages 3-4]. The artisan would not interpret this teaching of Matsuda as limiting the number of plates to even numbers only or to odd numbers only. The artisan would have appreciated that the number of plates could be adjusted as desired. Therefore, the broad recitation of an odd number of plates does not patentably distinguish over the teachings of the applied prior art.

The recitation of first and second plates being substantially identical in claim 8 does not require that the prior art teach or suggest the reversibility of plates to compensate for assembly imperfections. The artisan would have expected the plurality of plates making up the modified intermediate electrode of Shimoma to be substantially identical. Therefore, we also sustain the examiner's rejection of claim 8.

Dependent claims 9-11 all include the feature that "the thickness of the at least one intermediate electrode is between 30% and 40% of said predetermined [aperture] diameter." The examiner's position is that the claimed

Appeal No. 1998-0335
Application 08/518,061

relationship would be determined by routine experimentation, and there is no evidence of new and unexpected results on the record [answer, pages 4-5]. Appellants argue that neither Shimoma nor Matsuda teaches that there is an optimum relationship between aperture diameter and electrode thickness [brief, page 6].

We agree with appellants that the invention of claims 9-11 is not obvious within the meaning of 35 U.S.C. § 103 on this record. If the record reflected that the prior art was aware of some relationship between electrode thickness and aperture diameter, then the examiner might be correct that optimizing this relationship would require only routine skill. There is no evidence on this record, however, that the prior art recognized the claimed relationship at all. Absent some evidence to suggest that there should be some relationship between aperture diameter and electrode thickness, there is no support for the examiner's conclusion that the invention of claims 9-11 results from routine experimentation. Therefore, we do not sustain the rejection of claims 9-11.

In summary, we have sustained the examiner's rejection of claims 7 and 8 under 35 U.S.C. § 103, but we have not

Appeal No. 1998-0335
Application 08/518,061

sustained this rejection of claims 9-11. Accordingly, the decision of the examiner rejecting claims 7-11 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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Administrative Patent Judge)	
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JERRY SMITH)	
Administrative Patent Judge)	APPEALS AND
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Appeal No. 1998-0335
Application 08/518,061

JS:caw