

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte OLIVIER P. TRINCHERO,  
DAVID A. NEW AND YVES PONTAILLIER

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Appeal No. 97-2820  
Application 08/432,443<sup>1</sup>

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ON BRIEF

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Before HAIRSTON, KRASS and BARRETT, Administrative Patent Judges.  
HAIRSTON, Administrative Patent Judge.

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<sup>1</sup> Application for patent filed May 1, 1995.

Appeal No. 97-2820  
Application No. 08/432,443

DECISION ON APPEAL

This is an appeal from the final rejection of claims 3, 4, 6 and 7.

The disclosed invention relates to an inline electron gun. The main focus lens of the inline electron gun is formed by two electrodes that face each other. Each of the main focus electrodes is in turn formed from two different parts. One of the two parts is positioned within the other one of the two parts.

Claim 7 is the only independent claim on appeal, and it reads as follows:

7. In an inline electron gun, including a plurality of electrodes spaced from three cathodes, said electrodes forming at least a beam forming region and a main focus lens in the paths of three electron beams, a center beam and two side beams, and said main focus lens being formed by the facing portions of two of said electrodes, the improvement comprising

said facing portions of the two main focus lens electrodes each including a first part having a single aperture therein, and a second part positioned within said first part, said second part including three inline apertures therein, and

said first part including an apertured cup-shaped part with four spaced ledges, and said second part being an apertured plate with four corners, each corner including an offset, said apertured plate being attached to said four ledges at the offsets.

The references relied on by the examiner are:

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Greninger	4,388,552	June 14, 1983
Gerlach	4,626,738	Dec. 2, 1986
Hernqvist et al.(Hernqvist)	4,720,654	Jan. 19, 1988
Naiki	4,800,318	Jan. 24, 1989

Claims 3, 6 and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Greninger.

Claim 4 stands rejected under 35 U.S.C. § 103 as being unpatentable over Greninger in view of Gerlach.

Claims 6 and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Naiki in view of Hernqvist.

Claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over Naiki in view of Hernqvist and Greninger.

Claim 4 stands rejected under 35 U.S.C. § 103 as being unpatentable over Naiki in view of Hernqvist and Gerlach.

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

#### OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 3, 4, 6 and 7.

Appellants and the examiner recognize that the G3 and G4 electrodes in Greninger (Figure 3) are one-piece structures (Brief, pages 3 and 4, and Answer, page 4). According to the examiner (Answer, page 4), "the unity or diversity of parts

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appears to depend more upon the choice of the manufacturer, and the convenience and availability of the machines and tools necessary to construct the inline electron gun rather than any inventive concept (see *In re Lockhart* [, 190 F.2d 208, 210,] 90 USPQ 214-216 [CCPA 1951])." The examiner concludes (Answer, page 4) that "it would have been obvious to one of ordinary skill in the art that the inline gun of Greninger is a fully functional equivalent to the claimed inline electron gun." Appellants argue (Brief, page 4) that:

The fact is that Claim 7 claims more than just a two part construction. Claim 7 includes a "first part" that has "four spaced ledges", which are not disclosed in Greninger, and a "second part" that has "four corners, each corner including an offset", also which are not disclosed in Greninger. The claimed structure has more features than would be required simply to form each of the Greninger main focus lens electrodes out of two separate parts.

The obviousness rejection of claims 3, 6 and 7 based upon the teachings of Greninger is reversed because of the correctness of appellants' argument.

The obviousness rejection of claim 4 is reversed because the non-circular inline aperture teachings of Gerlach do not cure the noted shortcomings in the teachings of Greninger.

Naiki discloses two electrodes G3 and G4 (Figure 7) that are each formed from a first part 40 with a single aperture 50 therein, and a second part 60 positioned within the first part 40. The second part 60 includes three inline apertures 70B, 70G, and 70R. A continuous flange 64 (Figure 6) on the second part 60 is connected to a continuous flange 44 (Figure 5) on the first part 40. Thus, the two parts 40 and 60 are connected to each other along one continuous ledge<sup>2</sup> (Figure 7).

According to the examiner (Answer, page 5), Hernqvist discloses "a cup shaped part 22 with ledges (see FIG. 5, support portions 80) and an aperture plate with offsets (eyelets 96) for attaching an auxiliary electrode member (see col. 4, line 11-12, shield member 86) to the main electrode 22." The examiner is of the belief that "[i]t would have been obvious to use a cup shaped part with ledges for attaching an auxiliary electrode member with offsets, as disclosed by Hernqvist et al., instead of the side wall member, as disclosed by Naiki, as a design expedient" (Answer, page 5).

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<sup>2</sup> The examiner has not addressed the issue of whether it would have been obvious to one of ordinary skill in the art to use a continuous ledge connection in lieu of the claimed connection at the four spaced ledges and four corners.

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Appellants argue (Brief, pages 5 and 6) that:

Nowhere does Hernqvist et al. disclose four ledges and nowhere does Hernqvist et al. disclose any second part having offsets at its corners. There is no way that Hernqvist et al. and Naiki can be combined to achieve the present invention, and there is certainly no suggestion in either of these references that would make the presently claimed invention obvious.

We agree. In the absence of a prima facie case of obviousness, the rejection of claims 6 and 7 is reversed.

Turning to the obviousness rejection of claims 3 and 4, neither Greninger nor Gerlach discloses an electrode with one part having four spaced ledges and another part having four corners for connection with the four spaced ledges. The obviousness rejection of claims 3 and 4 is reversed because neither Greninger nor Gerlach is capable of curing the shortcomings in the teachings of Naiki and Hernqvist.

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DECISION

The decision of the examiner rejecting claims 3, 4, 6 and 7  
under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
ERROL A. KRASS	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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LEE E. BARRETT	)	
Administrative Patent Judge	)	

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