

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

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Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MAKOTO WATANABE,  
SEIICHI OGATA, YOSHITO IKEDA,  
and KYU KANNO

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Appeal No. 96-2618  
Application 08/263,252<sup>1</sup>

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ON BRIEF

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Before HAIRSTON, BARRETT, and FRAHM, Administrative Patent

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<sup>1</sup> Application for patent filed June 21, 1994, entitled "Composite Magnetic Head Having Thin Conductor Film," which is a continuation of Application 07/865,854, filed April 9, 1992, now abandoned, which claims the foreign filing priority benefit under 35 U.S.C. § 119 of Japanese Application 3-113831, filed April 19, 1991, Japanese Application 3-123032, filed April 26, 1991, Japanese Application 3-124628, filed April 30, 1991, and Japanese Application 3-131648, filed May 8, 1991.

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Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 5-7, 11, and 12.

We reverse.

BACKGROUND

With reference to Appellants' figure 21, the invention is directed to a composite magnetic head having a thin conductor film 593 or 594 formed on at least one of the faces of the opposing magnetic heads 557, 558 to intercept leakage fluxes from the opposing magnetic head gap g1, g2 to minimize interference and assure good recording and reproduction.

Claim 5 is reproduced below.

5. A composite magnetic head comprising:

a pair of magnetic heads having magnetic gaps having different azimuth angles from each other and disposed closely in an opposing relationship to each other in a head feeding direction to define respective track widths and a track pitch, said heads further having respective faces which are spaced from each other in opposing relation; and

a thin conductor film formed on at least one of said faces of said magnetic heads for intercepting leakage fluxes from the magnetic gap of the other magnetic head,

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the thin conductor film having a thickness and being located such that the track pitch formed by the magnetic heads is substantially independent of the thickness of the thin conductor film.

The Examiner relies on the following prior art:

Lorteije	4,860,132	August 22, 1989
Sanyo Electric Co. <sup>2</sup> (Sanyo) (Japanese Kokai)	62-22205	January 30, 1987

Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lorteije.

Claims 6, 7, 11, and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lorteije and Sanyo.

We refer to the Final Rejection (Paper No. 22) (pages referred to as "FR\_\_") and the Examiner's Answer (Paper No. 28) (pages referred to as "EA\_\_") for a statement of the Examiner's position and to the Brief (Paper No. 27) (pages referred to as "RBr\_\_") for Appellants' arguments thereagainst.

#### OPINION

#### Claim 5

The Examiner finds that "Lorteije also shows 'thin

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<sup>2</sup> A translation accompanies this decision.

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conductor film' 26 on opposing faces of the magnetic heads" (FR2). Appellants argue that "Lorteije does not disclose 'a thin conductor film formed on at least one of said faces of said magnetic heads for intercepting leakage fluxes from the magnetic gap of the other magnetic head'" (Br6). Appellants argue that "[t]he magnetic screen in Lorteije is positioned in a slot between the two transducer gaps such that there are air gaps on both sides of the screen" (Br7). The Examiner responds (EA6): "There is no support in Lorteije that there are air gaps on both sides of the screen. Yes, the screen is positioned in a slot, and in order for the head to operate as intended the screen would have to be secured to [the] slot."

The Examiner's finding is clearly erroneous. Figure 4 shows the magnetic screen 26 centered in and spaced from the sides of the gap 25. The Examiner has shown the gaps around the screen 26 in green and gold in the Attachment to the Examiner's Answer. That the width of the gap is larger than the width of the screen 26 is evidenced by the fact that the short-circuit turn 28, which is wound around the core part 17 and a portion of the central part 13, wraps around the edge in part 13 defining the right side of the gap, which is clearly

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shown as spaced from the edge of screen 26. Lorteije does not state how the screen 26 is secured in the gap, but clearly it cannot "float" in space; one can speculate that the gap is filled with glass or epoxy to cement the screen 26 in position. We agree with Appellants that Lorteije appears to disclose one of the admitted prior art methods of intercepting leakage fluxes (Br8, referring to specification, page 4, lines 22-24).

Appellants further argue that "[t]he magnetic screen in Lorteije is mechanically secured between two magnetic heads, perhaps to core 17, and is not a thin conductor film formed on the face of the magnetic heads" (Br7). The Examiner interprets the statement of "[secured,] perhaps to core 17" to mean that Appellants are suggesting the screen 26 is attached to the top of the slot 25, instead of the sides of the slot 25, which the Examiner considers to be equally likely (EA6-7).

The Examiner does not address the argument. How the screen 26 is secured is not the issue. Lorteije shows a space between the screen 26 and the three sides of the gap 25. Because of this space, the screen 26 must be a separate piece

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mounted (somehow) in the gap. The screen 26 cannot be a film formed on a face of the magnetic head because it does not touch the head. As Appellants note (Br8), the film formed on the head allows the distance between heads to be minimized as compared to the admitted prior art, represented by Lorteije, of a plate.

The Examiner has not made any arguments that figure 4 of Lorteije is not to scale and that the gaps between the screen 26 and the gap 25 are greatly exaggerated. Nor has the Examiner argued that it would have been obvious to put a film on the heads in view of Lorteije's teaching of using a screen to prevent crosstalk. The rejection relies completely on the erroneous finding that screen 26 is a film formed on a face of the magnetic head. The Examiner has failed to establish a prima facie case of obviousness. The rejection of claim 5 is reversed.

Claims 6, 7, 11, and 12

The Examiner applies Sanyo to teach the materials, resistance, and thickness of claims 6, 7, 11, and 12. The Examiner's statement of the rejection using Sanyo does not address the deficiencies of the rejection of claim 5. The

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Examiner has not argued that the high conductive layer 9a in Sanyo is a "thin conductor film" and that since the layer 9a is in contact with the head Ha, it would have been obvious to form the layer on the head Ha instead of on the magnetic material 8. The Examiner has failed to establish a prima facie case of obviousness. The rejection of claims 6, 7, 11, and 12 is reversed.

CONCLUSION

The rejection of claims 5-7, 11, and 12 is reversed.

REVERSED

KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
LEE E. BARRETT	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
ERIC FRAHM	)	
Administrative Patent Judge	)	

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