

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERARDUS M. DOHMEN

Appeal No. 95-5146
Application 08/152,557¹

ON BRIEF

Before KRASS, JERRY SMITH and BARRETT, 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 20-27, which constitute all the claims remaining in the application.

¹ Application for patent filed November 12, 1993.

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The claimed invention pertains to a longitudinal track recording system in which a multi-gap magnetic head records and reproduces information from longitudinal tracks on a magnetic tape. The magnetic head has a contact face for cooperating with the tape face of the magnetic tape. The invention concerns the placement of a cleaning groove of predetermined size in the contact face of the magnetic head for preventing the accumulation of dust and dirt particles.

Representative claim 20 is reproduced as follows:

20. A longitudinal track recording system, comprising a magnetic tape apparatus for use with a magnetic tape having one or more longitudinal recording tracks, the magnetic tape apparatus comprising a multi-gap magnetic head for writing and/or reading the magnetic tape, which magnetic head has a contact face for cooperation with a tape face of the magnetic tape, the head comprising a transducing structure having transducing gaps terminating in the contact face, characterized in that the contact face is provided with at least one cleaning groove for cleaning the tape face, which groove at the contact face has a width dimension of between 100 and 300 Fm and which groove extends at least substantially parallel to the transducing gaps and has at least one wall portion oriented at least substantially transversely to the contact face and constituting a scraping edge at the contact face, which scraping edge has a radius of curvature of between 1 and 5 Fm.

The examiner relies on the following references:

Soda et al. (Soda)	5,313,342	May 17, 1994 (effectively filed Nov. 29, 1990)
Kimura et al. (Kimura) (Japanese Kokai)	1-317261	Dec. 21, 1989

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Brock et al. (Brock), "Wear-Resistant Coating," IBM Technical Disclosure Bulletin, Vol. 11, No. 10, March 1969.

Claims 20-27 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Soda in view of Kimura with respect to claims 20 and 22-26, and adds Brock with respect to claims 21 and 27. A rejection of the claims under the second paragraph of 35 U.S.C. § 112 has been withdrawn by the examiner [answer, page 7].

Rather than repeat the arguments of appellant 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 rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the collective evidence relied upon and the level of skill in the particular art would not have suggested to one of

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ordinary skill in the art the obviousness of the invention as set forth in claims 20-27. Accordingly, we reverse.

We consider first the rejection of claims 20 and 22-26 under 35 U.S.C. § 103 as unpatentable over Soda in view of Kimura. These claims stand or fall together [brief, page 5]. Therefore, we will consider the rejection against independent claim 20 as representative of all the claims subject to this rejection. 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.,

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776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 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).

The examiner has cited Soda as representative of a conventional magnetic head which can record and reproduce on longitudinal magnetic tracks of analog or digital cassette tapes. The examiner acknowledges that Soda does not teach a cleaning groove on the contact face of the magnetic head as recited in independent claim 20 [answer, page 4]. The examiner cites Kimura as disclosing a magnetic head having a cleaning groove. The examiner asserts that it would have been obvious to provide the Soda magnetic head with a cleaning groove as taught by Kimura. With respect to the various dimensions recited in claim 20, the examiner argues that the specific claimed values would have been obvious through routine design experimentation [answer, pages 4-5].

Appellant argues that the indentations 2b which the examiner has referred to as the cleaning grooves in Kimura are

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not cleaning grooves at all [brief, page 7]. Appellant also argues that the claimed dimensions have been disclosed as being critical for proper operation of the magnetic tape recording and reproducing apparatus, and that the examiner has failed to demonstrate that the prior art suggests any dimensional characteristics for a scraping edge [brief, pages 7-8].

We agree with appellant that indentations 2b of Kimura are not on the contact face of the magnetic head for the purpose of cleaning the tape face. Although Kimura discusses a desire to reduce the amount of magnetic powder and binder which falls off of the magnetic tape, Kimura achieves this result by eliminating friction between the contact face of the magnetic head and the tape. Thus, Kimura discloses that the magnetic tape of his invention does not make contact with the head at large portions along the width of the tape [translation, page 7]. Kimura directs the artisan to eliminate contact between the tape face and the contact face of the magnetic head.

Indentations 2b of Kimura's Figure 3 are the result of eliminating material from the contact face which would otherwise contact the tape face. Kimura states that "[t]he areas at the running surface of the magnetic tape (2) near the magnetic cores (4) at both sides in directions A and B are eliminated so that

said resin (7) does not make contact with the magnetic tape (5), and are formed as concave areas (2b) and (2b) as indicated in Figure 3" [translation, page 8, underlining added]. Thus, it is clear to us that indentations 2b simply represent areas where material from the conventional magnetic head has been removed to reduce the amount of frictional contact between the head and the tape. Therefore, we agree with appellant that indentations 2b of Kimura are not properly considered cleaning grooves with a scraping edge as recited in the claims.

Even if we were to assume that the edges of Kimura's indentations 2b might frictionally scrape the surface of the magnetic tape at these edges, the specific dimensions of the cleaning groove recited in claim 20 would not have been obvious in view of the teachings of the applied prior art. The examiner considers the specific dimensions to be the result of routine design experimentation. Since Kimura designs indentations 2b to reduce the surface contact between the head and the tape and not to provide a scraping edge, the factors leading to the dimensions of Kimura's indentations 2b are totally unrelated to the factors leading to the design of a cleaning groove. Since Kimura's indentations are designed for an entirely different purpose, we agree with appellant that the specific dimensions of claim 20

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would not have been an obvious result from the teachings of Kimura. Accordingly, we do not sustain the rejection of claims 20 and 22-26.

We now consider the rejection of claims 21 and 27 under 35 U.S.C. § 103 as unpatentable over Soda in view of Kimura and further in view of Brock. These claims depend from and incorporate the limitations of independent claim 20 discussed above. Since the additionally applied Brock reference does not overcome the deficiencies noted above with respect to Soda and Kimura, we also do not sustain the rejection of claims 21 and 27.

In summary, we have not sustained either of the examiner's rejections of the claims. Therefore, the decision of the examiner rejecting claims 20-27 is reversed.

REVERSED

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