

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FUMIHIKO YOKOGAWA

Appeal No. 96-1346
Application 08/122,611¹

ON BRIEF

Before URYNOWICZ, KRASS and MARTIN, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1, 2, 7 and 9-19, all the claims pending in the application.

The invention pertains to a constant angular velocity optical disk. Claim 1 is illustrative and

¹ Application for patent filed September 15, 1993. According to applicant, this application is a continuation of Application 07/855,775, filed March 23, 1992.

reads as follows:

1. A constant angular velocity type optical disk comprising:

recording tracks;

a data information area for recording data information and a servo control information area for recording servo control information in the recording tracks;

pairs of wobble pits for tracking servo control, the wobble pits of each pair being adjacently arranged along one recording track in the servo control information area and provided in a staggered form in a radial direction of the optical disk with a center axis of said one recording track being disposed between the wobble pits of said each pair, wherein a pair of wobble pits is free of information therebetween; and

a track discrimination pit disposed in each said servo control information area and capable of discriminating between odd and even tracks;

wherein each wobble pit between two adjacent recording tracks is shared by both adjacent recording tracks as a wobble pit on an outer circumferential side of one of the adjacent recording tracks and as a wobble pit on an inner circumferential side of the other of the adjacent recording tracks which is situated at an outer circumferential side of said one of the adjacent recording tracks.

The references relied upon by the examiner as evidence of obviousness are:

Sugiyama et al. (Sugiyama)	4,980,877	Dec. 25, 1990
Verboom	5,270,991	Dec. 14, 1993 (Filed June 29, 1990)

The appealed claims stand rejected under 35 U.S.C. § 103 as unpatentable over Sugiyama in view of Verboom.

The respective positions of the examiner and the appellant with regard to the propriety of these rejections are set forth in the final rejection (Paper No. 16), the examiner's answer (Paper No. 22), the supplemental examiner's answer (Paper No. 24), the appellant's brief (Paper No. 21), reply brief (Paper No. 23) and supplemental reply brief (Paper No. 26).

Appellant's Invention

Appellant discloses an optical recording disk. In Figure 1, the disk is illustrated as having a pair of wobble pits P_w in a corresponding sector of each of a plurality of recording tracks. Each pair of wobble pits is located in the servo control information area F_s of a track sector (Figure 2) and the wobble pits of each pair are staggered with respect to each other in the track direction. Each wobble pit comprises an inner circumferential pit for a pair associated with one track and an outer circumferential pit for a pair associated with an adjacent track. Alternate tracks include a track discrimination pit P_{DET} disposed in a servo control information area to change the tracking polarity of signals from pairs of wobble pits.

Opinion

The examiner states that Sugiyama discloses an optical disk having tracks such as 6, 12 and 13, data information area 69 for recording servo control information, wobble pits 7, 8 along each track for

tracking control and track discrimination pits 70, 71 disposed in the servo control area for discriminating between odd and even tracks. The examiner indicates that each wobble pit is between two tracks and is shared by both tracks as a wobble pit on an outer circumferential side of one of the adjacent recording tracks and as a wobble pit on an inner circumferential side of the other of the adjacent recording tracks which is situated at an outer circumferential side of the one of the adjacent recording tracks. The examiner's answer acknowledges that Sugiyama does not teach pairs of wobble pits with no information therebetween as information area 69 is positioned between wobble pits 7 and 8. However, the examiner asserts that Verboom teaches such an arrangement of wobble pits.

Appellant contends that the combination of Sugiyama and Verboom fails "...to result in an optical disk having an adjacent pair of wobble pits and a track discrimination pit in the same servo control information area." It is urged that "Sugiyama relies on a determination of whether the pre-pit pair 7 or pre-pit pair 8 precedes the other for generating a track inversion signal (see col. 10, lines 26-41) and not on a track discrimination pit". Appellant asserts that pre-pits 70 and 71 of Sugiyama cannot function as the track discrimination pits of the claimed invention and only give header information including even or odd track identification after tracking is achieved.

Inasmuch as appellant does not challenge the prior art rejection of claims 2, 7 and 9-19 with any reasonable specificity, these claims fall with apparatus claim 1².

² Although appellant separately argues method claim 2 in the main brief at the paragraph bridging pages 5 and 6, the argument is in effect the same as made with respect to apparatus claim 1.

After consideration of the positions and arguments presented by both the examiner and the appellant, we have concluded that the rejection should be sustained. We agree in general with the comments made by the examiner; we add the following discussion for emphasis.

We find no merit to appellant's position to the effect that Sugiyama does not rely on track pre-pits 70, 71 to discriminate between odd and even tracks. That part of Sugiyama's disclosure relied on by appellant in support of this position, column 10, lines 26-41, does not establish that discrimination between odd and even tracks in the reference stems from a determination of whether the pre-pit pair 7 or pre-pit pair 8 precedes the other for generation of a track inversion signal. This portion of the disclosure indicates how the sequence of the pre-pits is recognized, but does not indicate that such sequences are utilized to discriminate between odd and even tracks. In contrast, the examiner has drawn attention to portions of Sugiyama's disclosure which in fact establish that pre-pits 70 and 71 are utilized to discriminate between odd and even tracks. Attention has been drawn to the fact that in Sugiyama's apparatus, the tracking polarity inverting circuit 90 of Figure 6 is controlled by a polarity inverting order signal 91, which happens to be the output signal from timing generation circuit 93 of Figure 5b. As noted by the examiner, the output signal of 93 is dependent on input signals at inputs 95 and 96, which signals are derived from light receiving planes 81, 82 (Figure 1). Column 6, line 54 to column 7, line 28, in turn discloses that the inputs from planes 81, 82 depend on returning light power from pre-pits 70 and 71, which are disposed alternately on odd and even recording tracks.

We disagree with appellant that the combined art fails to result in an optical disk having wobble and discrimination pits in the same servo control information area. If data area 69 of Figure 1a of Sugiyama is repositioned so as to group wobble pits 7 and 8 together in accord with the teaching in Verboom's Figure 2A, the result is that Sugiyama's wobble pits 7 and 8 and track discriminating pits 70 and 71 will be in the same servo control information area. In its briefs, appellant has failed to provide a detailed analysis of the disclosures of the prior art references relating to this issue. Accordingly, it is not known why appellant believes the combined teachings do not suggest the above subject matter.

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

AFFIRMED

STANLEY M. URYNOWICZ, JR.)
Administrative Patent Judge)
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) BOARD OF PATENT
ERROL A. KRASS) APPEALS AND
Administrative Patent Judge) INTERFERENCES
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Appeal No. 96-1346
Application 08/122,611

JOHN C. MARTIN
Administrative Patent Judge

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