

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MORIO FUJIWARA and NOBUYUKI ADACHI

Appeal No. 96-0632
Application 08/131,376¹

HEARD: January 14, 1999

Before URYNOWICZ, KRASS, and CARMICHAEL, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

Decision on Appeal

This appeal is from the final rejection of claims 1, 5, 7 and 8.

The invention pertains to a magnetic disk cartridge. Claim 5 is illustrative and reads as follows:

5. In a magnetic disk cartridge of a substantially square shape comprising a cartridge case formed by superimposingly combining opposed upper and lower shells formed of synthetic

¹ Application for patent filed October 5, 1993.

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resin, a disk-shaped recording medium rotatably received within said cartridge case, and a shutter for slidably opening and closing a window formed in said cartridge case, the improvement wherein said upper and lower shells each include a plurality of ribs respectively extending substantially symmetrically with respect to each other with a central line therebetween, said central line intersecting a rear edge of said case, said upper and lower shells having distortion stresses in a rear edge portion of each of said upper and lower shells before said upper and lower shells are combined together due to said ribs, said rear edge portions of said upper and lower shells bow toward the opposing shell, wherein formation of a gap between said upper and lower shells along said rear edge is inhibited when said upper and lower shells are combined together, wherein said ribs comprise two end portions of a side wall rib extending along said rear edge of said case, and further wherein a thickness of said two end portions of said side wall rib is greater than a thickness of said center portion of said side wall rib.

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

Iwamoto et al. (Iwamoto) 1989	4,814,927	Mar. 21,
Muehlhausen et al. (Muehlhausen) 1990	4,943,880	Jul. 24,
Ikebe et al. (Ikebe) 1992	5,081,556	Jan. 14,

Appealed claims 1, 5 and 7 are rejected under 35 U.S.C. § 103 as unpatentable over Iwamoto.

Appealed claim 8 is rejected under 35 U.S.C. § 103 as unpatentable over Iwamoto in view of Muehlhausen and Ikebe.

The respective positions of the examiner and the appellant with regard to the propriety of these rejections are set forth in

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the final rejection (Paper No. 8) and the examiner's answer (Paper No. 14) and the appellants' brief (Paper No. 13) and reply brief (Paper No. 16).

Appellants' Invention

In the prior art, and as illustrated in appellants' Figures 11 and 12, cartridges were welded in the vicinity of their four corners at points a-d. A gap tends to form in the rear end portions 1 of the cartridges between upper and lower shell portions thereof. With respect to the four embodiments illustrated in Figures 3-10, appellants' cartridge is constructed to inhibit the formation of that gap. Such structure comprises thick ribs 6 and 7 (the three embodiments of Figures 3-8), and 11 and 12 (the embodiment of Figures 9 and 10) which introduce distortion stresses in the rear edge portions 1 of shells A and B, causing the rear edge portion of each shell to bow towards the opposing shell.

The Rejections under 35 U.S.C. §103

Claims 1, 5, 7 and 8

After consideration of the positions and arguments presented by both the examiner and the appellants, we have concluded that the rejections should not be sustained. We agree in general with

the comments made by the appellants; we add the following discussion for emphasis.

The references applied against the claims include no discussion indicating that any of them recognized the problem addressed by the appellants, the problem being the formation of a gap between upper and lower shells of a cartridge². Nor is there any teaching in the references of the solution taught by appellants. That solution is the providing of ribs which introduce distortion stresses into rear edge portions of the upper and lower shells of a cartridge which tend to cause them to bow in the direction of the opposing shell.

Although the prior art need not be modified for reasons taught by an applicant, no satisfactory motivation has been given for making certain of the ribs of Iwamoto relatively thick with respect to rear edge portions of the shells 2 and 3. As to claims 1, 5 and 7, the examiner merely assumes that one of ordinary skill in the art would have sought to make certain ribs of Iwamoto thicker than the rear edge portions of the two shells, and argues that one would have sought an optimized thickness for the ribs.

² At page 3, lines 11-20, appellants acknowledge that the gap problem is disclosed in Japanese Utility Model Publications Nos. 60-180377 and 62-42172.

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It has not been explained in the first instance why one of ordinary skill in the art would have sought to make certain ribs of Iwamoto relatively thick with respect to a rear edge portion. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-1784 (Fed. Cir. 1992).

Claim 8 does not define one or more ribs of each shell of a cartridge having a thickness greater than the thickness of the rear edge portion of the shell. Nevertheless, the claim defines upper and lower shells having a plurality of ribs, distortion stresses in a rear edge portion of each of the shells due to said ribs, and rear edge portions of upper and lower shells which bow toward the opposing shell. The prior art combination simply does not teach a cartridge comprising shells wherein a rear edge portion of each shell has distortion stresses due to ribs, wherein each rear edge portion bows toward an opposing shell. Nor has it been explained why one of ordinary skill in the art at the time the invention was made would have found it obvious to modify the applied art in such a manner.

REVERSED

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Administrative Patent Judge)	
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)	BOARD OF PATENT
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