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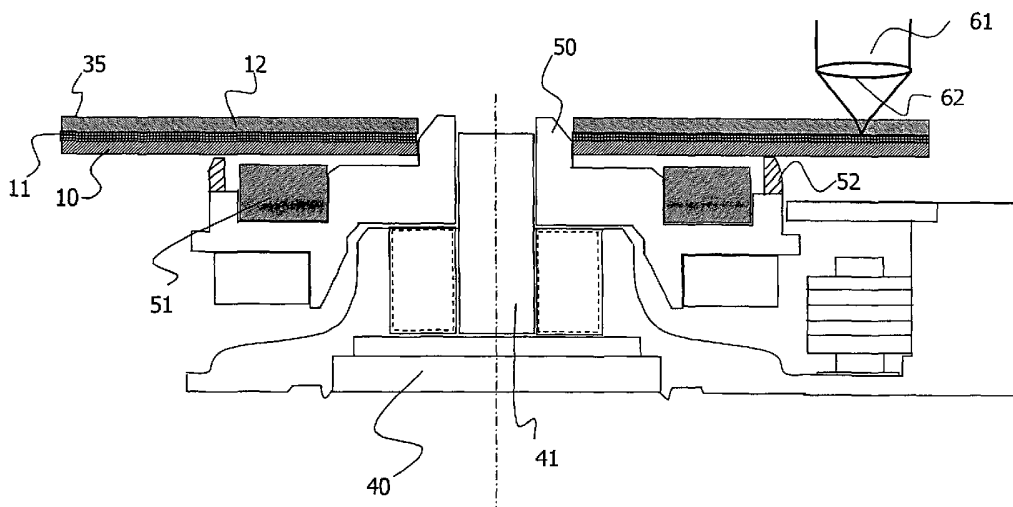
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Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG,

[Continued on next page]

(54) Title: MAGNETICALLY CLAMPED OPTICAL DISC AND APPARATUS



(57) Abstract: The invention relates to an optical disc (35) comprising a magnetic substrate (10) and to an optical recording and/or reproducing apparatus for recording and/or reproducing such an optical disc. By virtue of its magnetic properties, said magnetic substrate (10) is able to clamp the optical disc onto a turntable of said recording and/or reproducing apparatus instead of a hub. Heightening means (52) prevent contact between the disc and magnetic clamping means (51) at the turntable (50).



CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,
LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
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(88) **Date of publication of the international search report:**
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- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/06158

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B7/24 G11B17/028 G11B7/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 067 519 A (SONY CORP) 10 January 2001 (2001-01-10) cited in the application column 5, line 18 - line 20; figure 1 paragraph '0024!	1-8
A	EP 0 325 399 A (MITSUI PETROCHEMICAL IND) 26 July 1989 (1989-07-26) column 4, line 21 - line 32; figure 1	1-8



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

3 May 2004

Date of mailing of the international search report

18.05.04

Name and mailing address of the ISA

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Poth, H

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8

"Magnetic substrate"

2. claims: 9-11

"Heightening means"

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 03/06158

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-8

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 03/06158

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1067519	A	10-01-2001	JP 2001006210 A	12-01-2001
			AU 3644800 A	04-01-2001
			BR 0002781 A	30-01-2001
			CA 2310706 A1	22-12-2000
			CN 1290933 A	11-04-2001
			EP 1067519 A1	10-01-2001
			ID 26583 A	18-01-2001
			SG 96554 A1	16-06-2003
			TW 468150 B	11-12-2001
			US 2002060981 A1	23-05-2002
			US 2002054566 A1	09-05-2002
			US 2002071382 A1	13-06-2002
			US 6704275 B2	09-03-2004
			US 2002071383 A1	13-06-2002
EP 0325399	A	26-07-1989	JP 1109875 U	25-07-1989
			AT 110183 T	15-09-1994
			CN 1035200 A	30-08-1989
			CN 2044759 U	20-09-1989
			DE 68917483 D1	22-09-1994
			DE 68917483 T2	15-12-1994
			EP 0325399 A2	26-07-1989