



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
26.09.2007 Bulletin 2007/39

(51) Int Cl.:
B65D 5/54 (2006.01) B65D 65/30 (2006.01)
B65D 75/62 (2006.01) B65D 85/10 (2006.01)

(21) Application number: **06711564.2**

(86) International application number:
PCT/JP2006/300219

(22) Date of filing: **11.01.2006**

(87) International publication number:
WO 2006/075622 (20.07.2006 Gazette 2006/29)

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(72) Inventors:
• **TANBO, Hitoshi**
mida-ku, Tokyo, 1308603 (JP)
• **IZAWA, Akihide**
mida-ku, Tokyo, 1308603 (JP)
• **KAMIYA, Tomohiro**
tsu-shi, Shizuoka, 4328038 (JP)

(30) Priority: **14.01.2005 JP 2005007841**

(74) Representative: **Peckmann, Ralf**
Reinhard-Skühra-Weise & Partner GbR
Friedrichstrasse 31
80801 München (DE)

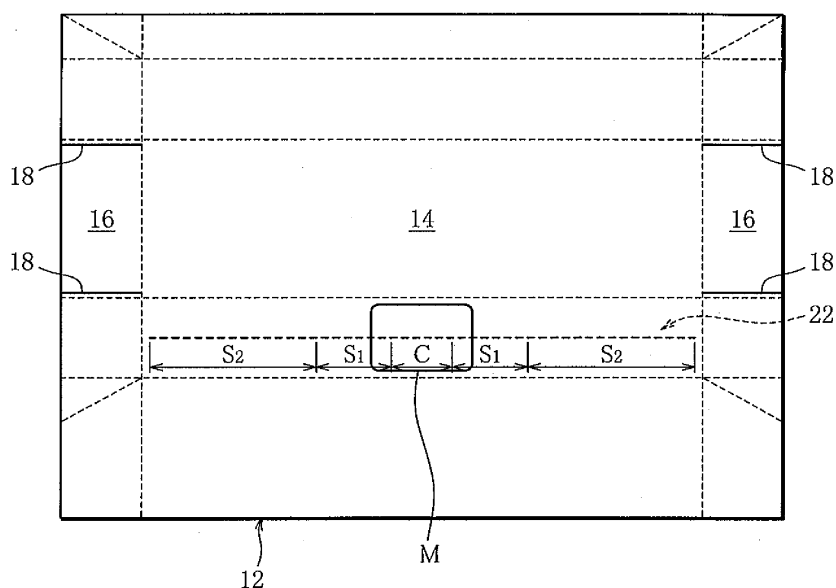
(71) Applicant: **Japan Tobacco, Inc.**
Tokyo 105-8422 (JP)

(54) **CIGARETTE PARCEL AND SHEET-LIKE PACKAGE MATERIAL THEREFOR**

(57) A cigarette parcel has a sheet-like wrapping material (12) that wraps a group of cigarette packs. The wrapping material (12) includes a perforated line (22). The perforated line (22) extends to a lateral face of the

cigarette parcel along a longitudinal direction of the parcel and has a central area C in the center. The central area C is formed as a fragile portion that can be ripped more easily than other areas of the perforated line.

FIG. 2



Description

Technical Field

[0001] The present invention relates to a cigarette parcel containing a group of cigarette packs of cigarettes or filter cigarettes, and to a sheet-like wrapping material for wrapping the group.

Background Art

[0002] A cigarette parcel of this type is disclosed, for example, in Unexamined Japanese Patent Publication No. 10-230552. This well-known cigarette parcel includes a pack group formed of a plurality of cigarette packs and a sheet-like wrapping material wrapping the pack group. The pack group includes packs arranged in a double row, and each row has five cigarette packs.

[0003] The cigarette parcel disclosed in the publication includes a perforated line formed in the wrapping material. The perforated line is used to rip the wrapping material at the time of opening the cigarette parcel and removing the cigarette packs.

[0004] The perforated line has a large number of perforations. These perforations are spaced at regular intervals in the longitudinal direction of the perforated line. The length of an intermediate portion between two adjacent perforations determines the breaking strength of the perforated line. When the pack group is wrapped in the wrapping material, the perforated line is required to have a breaking strength that is high enough to withstand an external force applied to the wrapping material. For this reason, the perforated line has relatively high strength. When the cigarette parcel is to be opened, therefore, the user has to break the intermediate portions of the perforated line by pushing his/her nail in the intermediate portions, and then rip the wrapping material while moving the nail along the perforated line.

[0005] However, there is a possibility that the nail-pushing damages each of the cigarette packs in the parcel. Especially if the cigarette packs are not overwrapped in a transparent film, the outer surfaces of the cigarette packs easily get scratched by the nail directly touching them.

[0006] It is an object of the present invention to provide a cigarette parcel that does not incur a defect attributable to the ripping of a sheet-like wrapping material when the pack group is wrapped in the wrapping material, and allows the wrapping material to be easily ripped later at the time of opening, and to provide a wrapping material for the pack group.

Disclosure of the Invention

Means to Solve the Problem

[0007] In order to achieve the above object, a cigarette parcel of the present invention comprises a pack group

having a longitudinal axis, the pack group including a plurality of cigarette packs, and a sheet-like wrapping material wrapping the pack group.

[0008] The wrapping material of the cigarette parcel of the invention includes a perforated line extending along the longitudinal axis of the pack group. The perforated line has perforations spaced apart along the longitudinal axis and intermediate portions between the perforations. When the total of lengths of each of the perforations and each of the intermediate portions along the longitudinal axis is expressed as a perforation pitch, the perforated line is further provided in a part thereof with a fragile area lower than another portion with respect to ratio of the intermediate portion to the perforation pitch.

[0009] When the cigarette parcel is to be opened, the wrapping material is first ripped from the fragile area of the perforated line. The ripping spreads the rest of areas of the perforated line, and the wrapping material is ripped along the perforated line. This makes it easy to remove each of the cigarette packs from the cigarette parcel.

[0010] Since the wrapping material has the fragile area only in one part of the perforated line, the wrapping material is not ripped along the perforated line when the pack group is wrapped in the wrapping material.

[0011] Specifically, the fragile area of the wrapping material may be positioned in the center of the perforated line as viewed in a direction of the longitudinal axis of the perforated line. The perforated line may be provided in both sides of the fragile area with a plurality of areas of which the connection ratios sequentially grow higher with an increasing distance from the fragile area.

[0012] More preferably, the wrapping material may further include a mark indicating the fragile area. The mark reliably makes the user aware of where to start ripping the perforated line when the cigarette parcel is to be opened.

[0013] The cigarette packs in the cigarette parcel may have outer surfaces in direct contact with the wrapping material.

[0014] The invention also provides a sheet-like wrapping material having the above-mentioned perforated line.

Brief Description of the Drawings

[0015]

FIG. 1 is a perspective view showing a cigarette parcel according to an embodiment of the present invention;

FIG. 2 is a developed view showing a sheet-like wrapping material of FIG. 1;

FIG. 3 is a view showing a part of a perforated line of FIG. 2 in an enlarged view;

FIG. 4 is a sectional view of the cigarette parcel of FIG. 1; and

FIG. 5 is a view showing a part of a perforated line according to another embodiment.

Best Mode of Carrying out the Invention

[0016] FIG. 1 shows a cigarette parcel according to an embodiment of the present invention.

[0017] The cigarette parcel has a group of cigarette packs CP 10 and a sheet-like wrapping material 12 that wraps the group 10. The group 10 includes the packs arranged in upper and lower rows as viewed in FIG. 1. Each of the pack rows has five cigarette packs CP.

[0018] The wrapping material sheet 12 is made up, for example, of paper. FIG. 2 is a developed view of the wrapping material 12. A central portion 14 of the wrapping material 12 is wound around the pack group 10 into a shape of the letter U. Both side edge portions of the wrapping material 12 are then superimposed upon each other on an underside surface of the pack group 10 and bonded together with an adhesive. In other words, the wrapping material 12 is made into a shape of a tube surrounding the pack group 10. The tube-shaped wrapping material 12 has lugs protruding from both ends of the pack group 10. The lugs are formed of both end portions 16 of the wrapping material 12.

[0019] Thereafter, the lugs are folded against respective end faces of the pack group 10 to form closed faces that cover the end faces. Each of the closed faces has end flaps positioned at both ends thereof and side flaps that are sequentially superimposed upon the end flaps. The side flaps are bonded to each other with an adhesive. As a result, the pack group 10 is completely wrapped in the wrapping material 12, and the cigarette parcel is formed.

[0020] Referring to FIG. 2, thin broken lines show fold lines that are formed by folding the wrapping material 12. The wrapping material 12 has a pair of slits 18 in each of the end portions 16. The slits 18 form upper side flaps 20 of the above-mentioned side flaps (see FIG. 1).

[0021] The wrapping material 12 has a perforated line 22, which is arranged in one of a pair of small lateral faces of the pack group 10. More specifically, the perforated line 22 is positioned in between the pack rows and extends in a longitudinal direction of the pack group 10, that is, in a direction of alignment of the cigarette packs CP in the pack rows. In FIG. 1, the perforated line 22 is shown by a broken line bolder than broken lines indicating outlines the cigarette packs CP.

[0022] As is apparent from FIG. 2, the perforated line 22 includes a central area C that is positioned in the center of the perforated line 22, and side areas S_1 and S_2 that are arranged in each side of the central area C. The side areas S_1 and S_2 are symmetrically positioned with respect to the central area C. As illustrated in FIG. 3, the perforated line 22 has a large number of perforations 26. The perforations 26 are spaced apart in the longitudinal direction of the perforated line 2. Intermediate portions interposed between the perforations 26 are denoted by reference numeral 24 in FIG 3.

[0023] Where length of each of the intermediate portions 24 and that of each of the perforations 26 along the

longitudinal direction of the perforated line are represented by L and S, respectively, the total of the lengths of the intermediate portion 24 and the perforation 26 located adjacent to each other (L+S) equals a perforation pitch P.

[0024] A ratio of the length L of the intermediate portion 24 to the perforation pitch P, namely a connection ratio R (L/P), differs from area to area of the perforated line 22. In the present embodiment, connection ratios R are determined as shown below.

Central area C:

$R_C=0.1$, perforation pitch $P=6$ mm, $L=0.6$ mm, and the number of pitches (the number of the intermediate portions 24) $N=5$

Side area S_1 :

$R_1=0.117$, perforation pitch $P=6$ mm, $L=0.7$ mm, and the number of pitches $N=6$

Side area S_2 :

$R_2=0.25$, perforation pitch $P=6$ mm, $L=1.5$ mm, the number of pitches $N=12$

[0025] Therefore, magnitude relation of the connection ratios R_C , R_1 , and R_2 of the central area C and of the side areas S_1 and S_2 are as follows:

$$R_C < R_1 < R_2$$

[0026] The connection ratio R_C of the central area C is lower than the connection ratios R_1 and R_2 of the side areas S_1 and S_2 , and the central area C forms a fragile area of the perforated line 22. Therefore, when the cigarette parcel is to be opened, connecting portions 24 of the central area C can be easily ripped simply by pulling portions of the wrapping material 12 which are located on both sides of the central area C of the perforated line 22 in opposite directions. The ripping in the central area C spreads the connecting portions 24 of the side S_1 and S_2 in order, so that the wrapping material 12 is thoroughly ripped along the perforated line 22. Consequently, each of the cigarette packs CP can be removed from the cigarette parcel without difficulty.

[0027] Since the perforated line 22 has the central area C as a fragile area only in the center thereof, the wrapping material 12 is not ripped along the perforated line 22 when the pack group 10 is wrapped in the wrapping material 12.

[0028] The length of each of the intermediate portions 24 in the central area C and in the side areas S_1 and S_2 is very short. Therefore, it is not easy to visually recognize difference in size of the intermediate portions 24 of each of these areas. According to the present embodiment, however, the wrapping material 12 is provided before-

hand with a mark M surrounding the central area C as illustrated in FIGS. 1 and 2. If portions of the wrapping material 12 which are located on both sides of the perforated line 22 are pulled in opposite directions, using the mark M as a sign, the intermediate portions 24 of the central area C are ripped without fail.

[0029] FIG. 4 more specifically shows the cigarette pack CP in the cigarette parcel. The cigarette pack CP may be a hinge-lid pack or soft pack that is overwrapped in a transparent film. The cigarette pack CP in the cigarette parcel, however, is preferably a tongue-lid pack that is not overwrapped in the transparent film.

[0030] In the case of a tongue-lid pack of this type, a cigarette bundle is wrapped in a highly airtight inner wrapper, so that film packing is not necessary.

[0031] If the cigarette pack CB in the cigarette parcel is the tongue-lid pack, a user can easily rip the wrapping material 12 of the cigarette parcel without pushing the nail in the perforated line 22. It then prevents the outer surface of the tongue-lid pack from being scratched by the user's nail.

[0032] The invention is not limited to the embodiment and may be modified in various ways.

[0033] For instance, the central area of the perforated line 22 may be replaced with a central area C' shown in FIG. 5. In this case, the central area C' has a structure shown below.

[0034] Central area C':

Connection ratio $R_{C'}=0.778$, perforation pitch $P=9$ mm, $L=0.7$ mm, and the number of pitches $N=3$. Needless to say, the connection ratio $R_{C'}$ of the central area C' is lower than the connection ratios R_1 and R_2 of the side areas S_1 and R_2 .

[0035] The side areas S_1 and S_2 may be integrated together in either of the side areas. Alternatively, another side area having a higher connection ratio may be provided outside of the side area S_2 .

Claims

1. A cigarette parcel comprising:

a pack group having a longitudinal axis, said pack group including a plurality of cigarette packs; and
a sheet-like wrapping material wrapping said pack group, wherein:
said wrapping material includes a perforated line extending along the longitudinal axis of said pack group;
the perforated line has perforations spaced apart along the longitudinal axis and intermediate portions between the perforations; and
where the total of lengths of each of the perforations and each of the intermediate portions

along the longitudinal axis is expressed as a perforation pitch, the perforated line is further provided in a part thereof with a fragile area lower than another portion with respect to ratio of the intermediate portion to the perforation pitch.

2. The cigarette parcel according to claim 1, wherein:

the fragile area is arranged in the center of the perforated line as viewed in a direction of the longitudinal axis.

3. The cigarette parcel according to claim 2, wherein:

the perforated line is provided in both sides of the fragile area with a plurality of areas of which the connection ratios sequentially grow higher with an increasing distance from the fragile area.

4. The cigarette parcel according to claim 1, wherein:

said wrapping material further includes a mark indicating the fragile area.

5. The cigarette parcel according to claim 1, wherein:

the cigarette pack has an outer surface in direct contact with said wrapping material.

6. A sheet-like wrapping material for wrapping a pack group including a plurality of cigarette packs and having a longitudinal axis, comprising:

a perforated line extending along the longitudinal axis of the pack group, wherein:
said perforated line including perforations spaced apart along the longitudinal axis and intermediate portions between the perforations; and

where the total of lengths of each of the perforations and each of the intermediate portions along the longitudinal axis is expressed as a perforation pitch, said perforated line is further provided in a part thereof with a fragile area lower than another portion with respect to ratio of the intermediate portion to the perforation pitch.

7. The wrapping material according to claim 6, wherein:

the fragile area is arranged in the center of said perforated line as viewed in a direction of the longitudinal axis.

8. The cigarette parcel according to claim 7,
wherein:

said perforated line is provided in both sides of
the fragile area with a plurality of areas in which
connection ratios sequentially grow higher with
an increasing distance from the fragile area.

5

9. The wrapping material according to claim 6,
wherein:

10

the wrapping material further includes a mark
indicating the fragile area.

15

20

25

30

35

40

45

50

55

FIG. 1

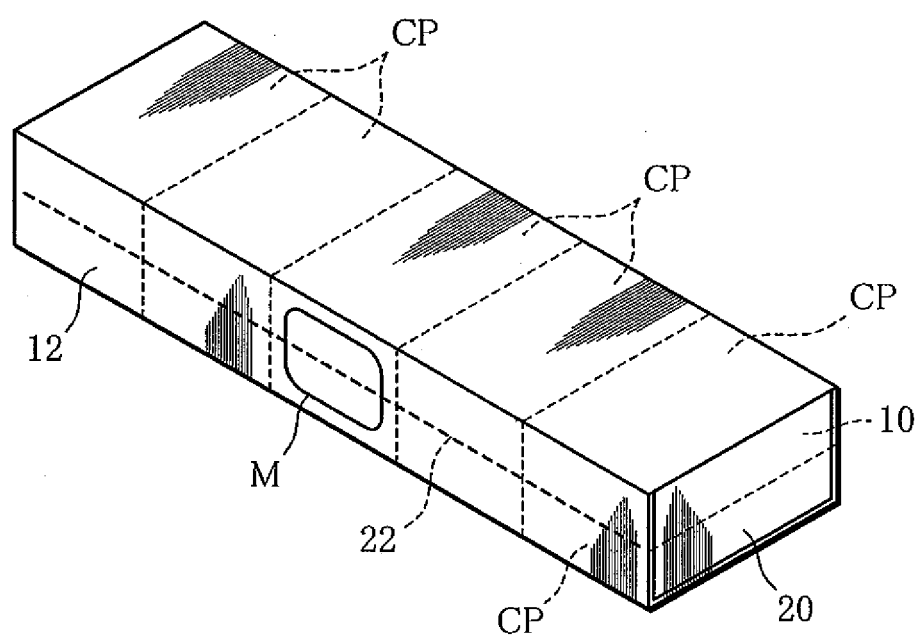


FIG. 2

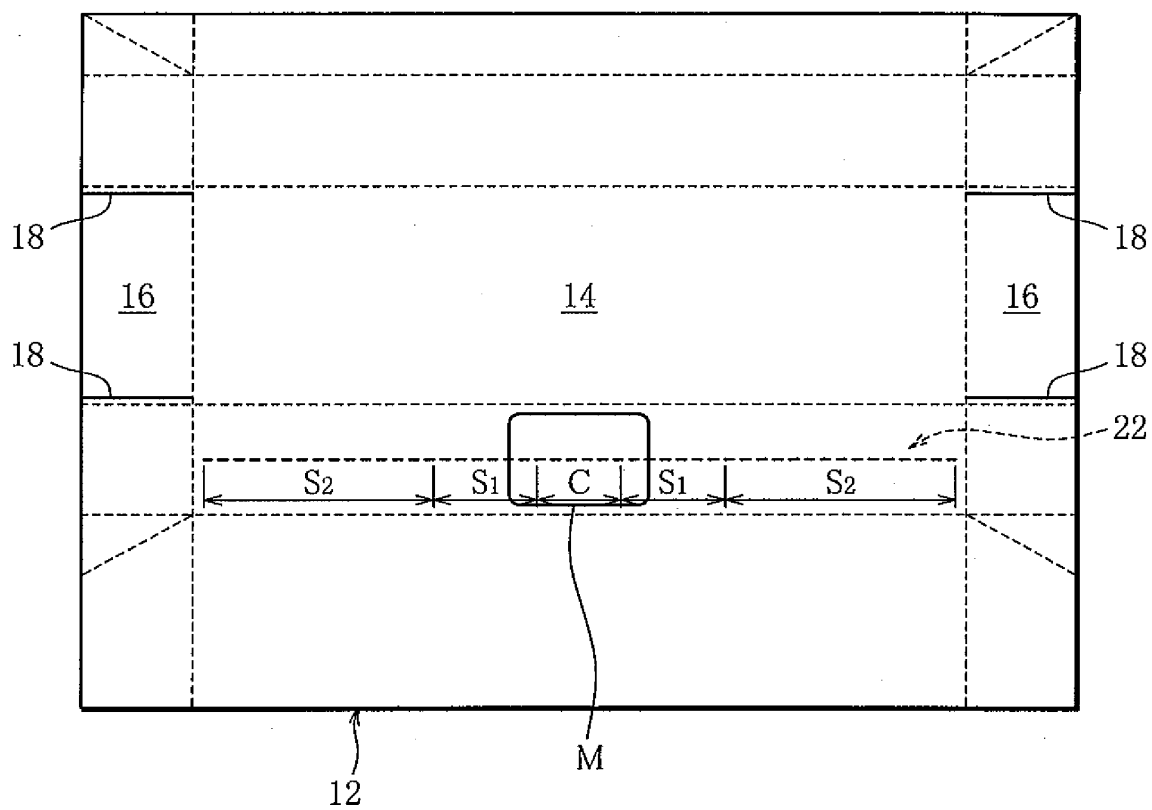


FIG. 3

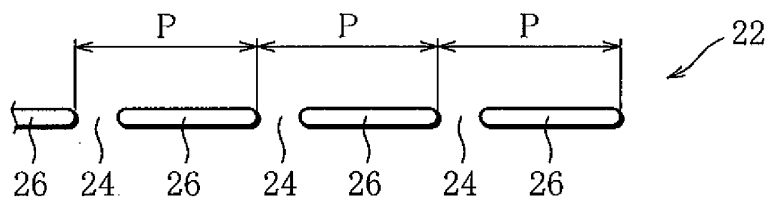


FIG. 4

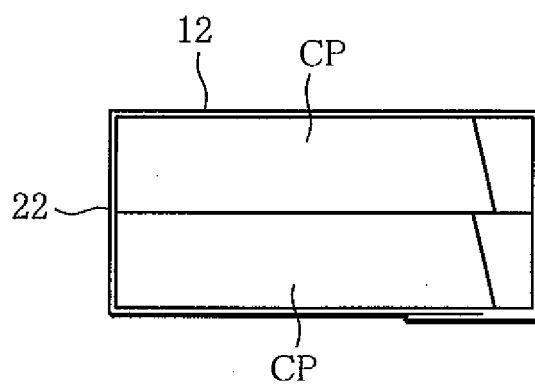
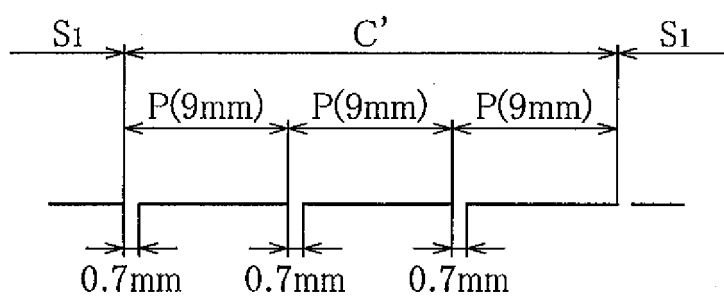


FIG. 5



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2006/300219

A. CLASSIFICATION OF SUBJECT MATTER

B65D5/54 (2006.01), **B65D65/30** (2006.01), **B65D75/62** (2006.01), **B65D85/10** (2006.01)

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)

B65D5/54, B65D65/30, B65D75/62, B65D85/10

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

Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2006

Kokai Jitsuyo Shinan Koho 1971-2006 Toroku Jitsuyo Shinan Koho 1994-2006

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 10-230552 A (Focke & Co. (GmbH & Co.)), 02 September, 1998 (02.09.98), Par. Nos. [0010] to [0030]; Figs. 1 to 6 & DE 19648242 A1 & EP 0854098 A2	1-9
Y	JP 44-019355 Y1 (Fuji Photo Film Co., Ltd.), 19 August, 1969 (19.08.69), Page 1, left column, line 23 to right column, line 19; Figs. 1 to 2 (Family: none)	1-9

☒ Further documents are listed in the continuation of Box C.

☐ See patent family 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 application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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
06 February, 2006 (06.02.06)

Date of mailing of the international search report
14 February, 2006 (14.02.06)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2006/300219

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No. 060501/1991 (Laid-open No. 013950/1993) (Sony Corp.), 23 February, 1993 (23.02.93), Par. Nos. [0007] to [0009]; Figs. 1 to 4 (Family: none)	1-9
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 071346/1983 (Laid-open No. 176574/1984) (Kabushiki Kaisha Puresuaruto Kai), 26 November, 1984 (26.11.84), Description; page 2, line 3 to page 3, line 5; Figs. 1 to 2 (Family: none)	4, 9
Y	JP 10-101130 A (Sony Corp.), 21 April, 1998 (21.04.98), Par. Nos. [0020] to [0037]; Figs. 1 to 10 & EP 0835824 A1	4, 9

Form PCT/ISA/210 (continuation of second sheet) (April 2005)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 10230552 A [0002]