

**Search query (3):** [SP]: containment body for making a capsule for making beverages and method for making capsules with different quantities of powdered food substance using a single type of containment body a containment body for making a cup-shaped capsule for making beverages comprising a lateral wall (4) that, in a zone of it closer to an upper edge (5) than to a bottom wall (3), is provided with one or more retaining elements (8) projecting towards the central axis in a plane substantially perpendicular to the central axis, the one or more retaining elements (8) forming between them and the bottom wall (3) an undercut seat (9) and a method for making capsules comprising different quantities of powdered food substance using said containment body (1) and positioning an upper filtering element (16) either coupled to the undercut seat (9) or positioned close to a lid (15).  
**Results:** 155

#### Search history

Search PN=(WO2016087981) (Results 1)

1:

Search [SP]: 1. a containment body for making a capsule for making beverages, comprising: a bottom wall (3) a lateral wall (4) connected to the bottom wall (3) at a peripheral portion of the bottom wall and an upper edge (5) connected to the lateral wall (4) on a side opposite to the bottom wall (3) and delimiting an access opening (6) for accessing an inner space (7) of the containment body (1), the inner space (7) being delimited at the bottom by the bottom wall (3) and laterally by the lateral wall (4), in use a powdered food substance for making a beverage and one or more filtering elements being insertable in the inner space (7) a central axis of the containment body (1) being identifiable between a central point of the bottom wall (3) and a central point of the access opening (6) characterised in that the lateral wall (4), in a zone of the lateral wall closer to the upper edge (5) than to the bottom wall (3), is provided with one or more retaining elements (8) projecting towards the central axis in a plane substantially perpendicular to the central axis, the one or more retaining elements (8) forming between them and the bottom wall (3) an undercut seat (9) relative to the line of extension of the central axis. 2. the containment body according to claim 1, characterised in that the lateral wall (4) is provided with a plurality of said retaining elements (8) which are distributed about the central axis in said plane substantially perpendicular to the central axis, and which are spaced relative to one another. 3. the containment body according to claim 1, characterised in that the lateral wall (4) comprises, from the bottom wall (3) towards the upper edge (5), a first portion (10) and a second portion (11), the first portion (10) at least mainly having a frustoconical shape, and the second portion (11) having a substantially cylindrical shape, the second portion (11) having an internal diameter which is larger than a maximum internal diameter of the first portion (10), and in that the one or more retaining elements (8) and the undercut seat (9) are all made at the second portion (11). 4. the containment body according to claim 3, characterised in that the first portion (10) comprises a plurality of stiffening profiles (13). 5. the containment body according to claim 1, characterised in that at a zone of the lateral wall closer to the bottom wall (3) than to the access opening (6), the lateral wall (4) also comprises a hooking seat (14) formed by a portion of the lateral wall projecting towards the central axis and/or away from the central axis. 6. the containment body according to claim 1, characterised in that it is at least mainly constituted of a thermoformed multi-layer material. 7. a capsule for making beverages, containing a powdered food substance which allows a beverage to be made by passing hot water through the powdered food substance, the capsule (2) comprising: a containment body (1) made according to claim 1 a lid (15) fixed to the upper edge (5) which closes the top of the inner space (7) said powdered food substance being contained in the inner space (7) of the containment body (1) at least an upper filtering element (16) comprising at least an annular peripheral edge (18) associated with the lateral wall (4), the upper filtering element (16) dividing the inner space (7) into a main chamber (19) delimited between the upper filtering element (16) and the bottom wall (3), and into a secondary chamber (20) delimited between the upper filtering element (16) and the lid (15), the powdered food substance being contained in the main chamber (19) characterised in that the annular peripheral edge (18) is coupled to said undercut seat (9) and in that the one or more retaining elements (8) limit the maximum movement of the upper filtering element (16) towards the lid (15). 8. the capsule according to claim 7, characterised in that the annular peripheral edge (18) is coupled to the retaining elements (8) and/or to the undercut seat (9) with interference fit. 9. the capsule according to claim 7, characterised in that the annular peripheral edge (18) comprises one or more radial teeth (21) extending in a plane substantially perpendicular to the central axis and which are inserted in the undercut seat 9. 10. the capsule according to claim 7, characterised in that the annular peripheral edge (18) comprises an outer retaining portion (23) which, in a cross-section plane passing through the central axis, comprises an inner first stretch (24) extending away from a plane perpendicular to the central axis, and an outer second stretch (25) which is bent over the first stretch (24) and which together with the first stretch (24) forms a v shape, at least at the second stretch (25) the retaining portion (23) being elastically deformable in such a way as to allow the second stretch (25) to be drawn near to the first stretch (24), the retaining portion (23) being coupled to the lateral wall (4) at the undercut seat (9) in such a way that the retaining portion (23) is elastically deformed and the second stretch (25) is near to the first stretch (24). 11. the capsule according to claim 10, characterised in that the retaining portion (23) is inserted in the undercut seat (9) at least at the second stretch (25). 12. the capsule according to claim 7, characterised in that the upper filtering element (16) is hooked in a snap-in fashion to the one or more retaining elements (8). 13. a method for making capsules for making beverages, containing a first quantity or a second quantity larger of the first quantity, of at least one powdered food substance which allows a beverage to be made by passing hot water through the powdered food substance, using a single type of containment body (1), comprising the steps of: taking a containment body (1) made according to claim 1 taking at least an upper filtering element (16) comprising at least an annular peripheral edge (18) couplable to the undercut seat (9) in such a way that the one or more retaining elements (8) limit the maximum movement of the upper filtering element (16) towards the lid (15), when the annular peripheral edge (18) is coupled to the undercut seat (9) the upper filtering element (16) dividing the inner space (7) into a main chamber (19) delimited between the upper filtering element (16) and the bottom wall (3), and into a secondary chamber (20) delimited between the upper filtering element (16) and the access opening (6) taking a first quantity of powdered food substance which occupies a volume not greater than that of the main chamber (19), or respectively a second quantity of powdered food substance which occupies a volume greater than that of the main chamber (19) and not greater than the sum of the volumes of the main chamber (19) and the secondary chamber (20) inserting in the inner space (7) the first quantity or respectively the second quantity of powdered food substance, through the access opening (6) then inserting in the inner space (7), through the access opening (6), the upper filtering element (16) above the powdered food substance, positioning the annular peripheral edge (18) so that the annular peripheral edge is facing the lateral wall (4) and closing the access opening (6) by fixing a lid (15) to the upper edge (5) when the quantity of powdered food substance inserted in the capsule (2) is equal to the first quantity, the upper filtering element (16) being inserted in the containment body (1) in such a way that the annular peripheral edge (18) is coupled to the undercut seat (9) whilst when the quantity of powdered food substance inserted in the capsule (2) is equal to the second quantity, the upper filtering element (16) being positioned close to the access opening (6). 14. the method according to claim 13, characterised in that the same type of filtering element is taken both for making capsules (2) with the first quantity of powdered food substance and for making capsules (2) with the second quantity of powdered food substance. 15. the method according to claim 13, characterised in that it comprises the step of taking an upper filtering element (16) whose annular peripheral edge (18) comprises one or more radial teeth (21) extending in a plane substantially perpendicular to the central axis and which are couplable to the undercut seat (9). 16. the method according to claim 13, characterised in that it comprises the step of taking an (Results 0)

Search [SP]: containment body for making a capsule for making beverages and method for making capsules with different quantities of powdered food substance using a single type of containment body a containment body for making a cup-shaped capsule for making beverages comprising a lateral wall (4) that, in a zone of it closer to an upper edge (5) than to a bottom wall (3), is provided with one or more retaining elements (8) projecting towards the central axis in a plane substantially perpendicular to the central axis, the one or more retaining elements (8) forming between them and the bottom wall (3) an undercut seat (9) and a method for making capsules comprising different quantities of powdered food substance using said containment body (1) and positioning an upper filtering element (16) either coupled to the undercut seat (9) or positioned close to a lid (15). (Results 155)

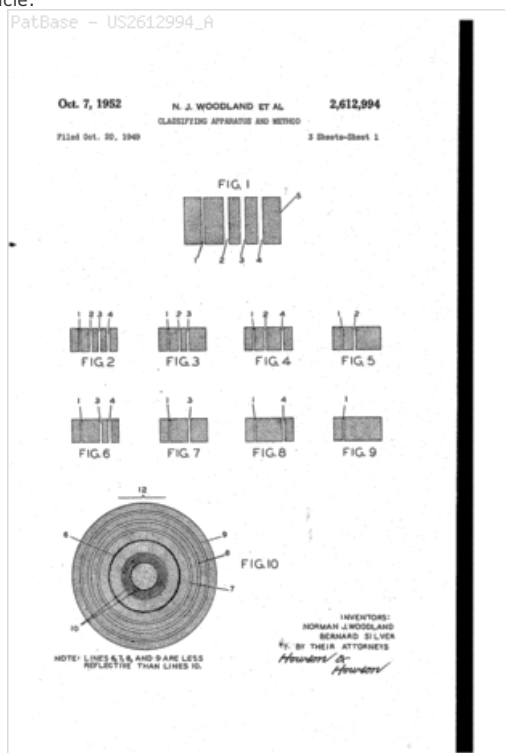
**Title:** CLASSIFYING APPARATUS AND METHOD  
**Priority:** US19490122416 19491020  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2612994 A        | 19521007         | US19490122416      | 19491020         |

  
**Probable Assignee:** BERNARD SILVER  
**Assignee(s):(std):** BERNARD SILVER ; WOODLAND NORMAN J  
**Inventor(s):(std):** WOODLAND NORMAN J ; BERNARD SILVER  
**Inventor(s):** SILVER BERNARD  
**International class (IPC 8-9):** G06K7/10 (Advanced/Invention); G06K7/10 (Core/Invention)  
**International class (IPC 1-7):** B07C3/10 B07C3/14 G07C11/00  
**CPC:** Y10S101/36 G06K7/10871  
**European class:** G06K7/10S9E1  
**US class:** 101/DIG.36 209/583 235/462.03 235/462.16 235/491 235/494 235/91L 250/223R D18/026 D18/26  
[Classification Explorer](#)  
**Cited documents:** US2441596 A, US2400574 A, US2358051 A, US2280948 A, US2224646 A, US2020925 A, US1985035 A, GB256223 A,  
**Forward Citations:** WO15026254, WO11064435, WO10091208, WO08066596, WO08066596, WO08050156, WO08050156, US9915530, US9868588, US9846797, US9772394, US9686532, US9638507, US9522201, US9494412, US9482755, US9482746, US9482529, US9482514, US9473761, US9453913, US9453717, US9448059, US9400170, US9395174, US9384619, US9377885, US9336474, US9207309, US9164173, US9162001, US9158954, US9157987, US9151830, US9146094, US9041914, US9007601, US8971566, US8870060, US8864327, US8746566, US8712163, US8462986, US8385592, US8194914, US8152070, US8094870, US7753781, US7693899, US7693855, US7510125, US7124947, US7124947, US6064763, US5869828, US5786583, US5777309, US5742041, US5675137, US5619027, US5612524, US5539191, US5514858, US5486689, US5415553, US5389770, US5351078, US5283641, US5249045, US5241166, US5128753, US5128528, US5119205, US5119190, US4988186, US4924078, US4059225, US3985293, US3933094, US3862400, US3818191, US3808405, US3744026, US3731064, US3663800, US3639728, US3622758, US3558899, US3553438, US3413447, US3388237, US3324301, US3257897, US3225175, US3152256, US3136424, US3044696, US3035380, US3012667, US3004702, US2966594, US2944667, US2941086, US2928953, US2925586, US2899132, US2853188, US2742151, US2731621, US2014328977, US2014295032, US2013064929, US2012029994, US2011168776, US2010195866, US2009230193, US2009138434, US2008045333, US2008035730, US2008027983, US2007189579, US2005125399, US2004153209, US2004061326, US2003121979, US2003087694, JP6018215, JP2014533159, FR2422183, EP2567910, EP2086859, EP1528987, EP1528987, DE202011105502, DE102012014580, CN103945743, CN103945743,

**Abstract:**

(Claim 1) 1. Apparatus for classifying articles having thereon concentric circular lightreflective outer classification lines and inner auxiliary lines; comprising means for continuously moving the articles in a straight path past a scanning position; scanning means at said position for producing electrical pulses corresponding to said lines; means for oscillating said scanning means transversely of said path to effect scanning diametrically of the circular pattern on each article; a plurality of normally-inoperative electronic classifying devices; electronic means responsive to the pulses corresponding to said auxiliary lines for conditioning said devices for operation; and means for effecting operation of said devices, by the pulses corresponding to said classification lines, in a pattern corresponding to the pattern of the classification lines on each article.



**Title:** SELF-TIMING ENCODED TAG READER  
**Priority:** US19680760840 19680919 US19680760841 19680919  
**Family:**

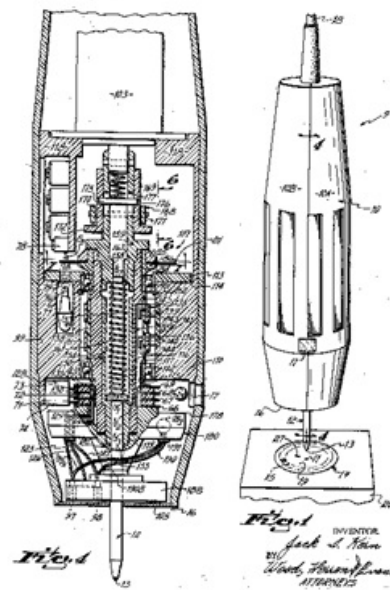
|  | Publication number | Publication date | Application number | Application date |
|--|--------------------|------------------|--------------------|------------------|
|  | BE724344 A         | 19690502         |                    | 19681122         |
|  | DE1933186 A1       | 19701022         | DE19691933186      | 19690630         |
|  | FR1600021 A        | 19700720         |                    | 19681230         |
|  | GB1258321 A        | 19711230         |                    | 19690313         |
|  | NL6817245 A        | 19700323         | NL19680017245      | 19681202         |
|  | US3585366 A        | 19710615         | US19680760840      | 19680919         |
|  | US3585367 A        | 19710615         | US19680760841      | 19680919         |

**Probable Assignee:** MONARCH MARKING SYSTEMS INC  
**Assignee(s):(std):** MONARCH MARKING SYSTEMS INC  
**Assignee(s):** THE MONARCH MARKING SYSTEM COMPANY ; MONARCH MARKING SYSTEM CO ; MONARCH MARKING SYSTEM CO THE  
**Inventor(s):(std):** CLAYTON HUMBARGER ROSS ; HUMBARGER ROSS C ; IRVIN KERN JACK ; KERN JACK I  
**Inventor(s):** ROSS C HUMBARGER ; JACK I KERN  
**International class (IPC 8-9):** G06K7/10 (Advanced/Invention); G06K7/10 (Core/Invention)  
**International class (IPC 1-7):** G01N21/30 G06K7/14 H03K13/00 H03K13/18  
**CPC:** G06K7/10881  
**European class:** G06K7/10S9F  
**US class:** 235/437 235/454 235/462.03 235/494 250/566

[Classification Explorer](#)

**Cited documents:** US3480762 A, US3474234 A, US3173000 A,  
**Forward Citations:** US9811704, US9582699, US9268984, US7604619, US7270277, US6533181, US6229964, US5866894, US5861613, US5479002, US5281800, US5144120, US4493989, US4141493, US3991300, US3875419, US3866056, US3819911, US3752961, US3748483, US3735142, US3731062, US3727030, US2016232390, US2009100238, US2004178255, US2003121979, EP0837417,

**Abstract:**  
1,258,321. Label readers. MONARCH MARKING SYSTEM CO. 13 March, 1969 [19 Sept., 1968 (2)], No. 13368/69. Heading G4M. [Also in Division G1] In an arrangement for sensing code marks arranged in a circular track on a label or the like by means of a rotating scanning head, n times as many clock pulses as there are bit positions in the track are generated in each revolution of the scanning head, and a counter which is started in response to sensing a start mark on the label causes sampling of the scanning head output at every nth pulse. Scanning head, Fig. 4.-A motor 103 rotates a disc 188 carrying photodetectors 97, 98 for sensing the code and start marks respectively, illumination of the label being provided by a lamp 183 and optical fibres 190. The detector supply and output leads 125-127 are connected to external circuits by way of slip rings 129-131. Rotating with the head is a slotted opaque disc 81 having an associated lamp 76 and detector 78 for generating the clock pulses. The spring-biased probe 12 for engagement with a central aligning hole in the label has an associated switch which is actuated when the probe is in the retracted position. Circuit, Figs. 10A, 10B.-The probe switch 165 when actuated energizes motor 103 and lamps 183, 76, and removes the system reset signals provided by circuit 371. If the associated equipment e.g. a cash register or D.P.A. is ready to receive data, detection of the start mark sets flip-flop 214 so that clock pulses (20 per code position) are passed by gates 219, 223 to a divide by 2 I 10 counter 233, 234 for the period in which the start mark is detected so that, at the end of this period, counter 234 holds a number corresponding to half the width of the start mark and enables a corresponding one of gates 251 to 258. The clock pulses are also fed for a complete scanning cycle to a decode counter 238 having outputs connected to gates 251 to 258 so that the selected one of these gates is enabled twice in every code mark scanning period. A divide by two flip-flop 240 is driven by counter 238 and inhibits every other output from NOR gate 262 at gate 260 to provide sampling pulses at the approximate mid point of each code mark pulse. The code pulses are entered in a register having its stages 271- 275 enabled in turn by a ring counter 315-319 driven by a stepping circuit 320 connected to outputs of counter 238. When a complete character has been entered in the register, circuit 340 causes read-out from the register and samples the state of a parity check circuit 350 to which the sampled code pulses are applied over line 261. A parity error produces a system reset signal. Read-out of each character advances a counter 361 so that end of message circuit 360, in conjunction with sensing of the start mark for the second time, sets a flip-flop 381 to light an indicator lamp on the scanning head as well as providing a system reset signal. Removal of the probe from the label de-energizes the motor and the lamps. Modified circuit, Figs. 13A, 13B (not shown). -Every other clock pulse is fed to a counter while the start mark is being sensed, and thereafter all clock pulses are counted to provide sampling pulses at the mid points of the code marks, these sampling pulses being applied as a shift input to a shift register to which the code pulses are fed. When each character has been entered, it is gated out in parallel by a shift register marker pulse initially inserted in the first stage. Similar end of message and parity check circuits to those mentioned above are also provided.



Title:

Priority:

Family:

Probable Assignee:

Assignee(s):(std):

Inventor(s):(std):

Inventor(s):

International class (IPC 8-9):

International class (IPC 1-7):

CPC:

European class:

US class:

Classification Explorer

Forward Citations:

MACHINE READABLE CODE TRACK

US19690819760 19690428

| Publication number                                                                            | Publication date | Application number | Application date |
|-----------------------------------------------------------------------------------------------|------------------|--------------------|------------------|
|  US3636317 A | 19720118         | US19690819760      | 19690428         |

CHARECOGN SYSTEMS INC

CHARECOGN SYSTEMS INC

TORREY BRADFORD M

BRADFORD M TORREY

G06K19/06 G06K7/10 (Advanced/Invention)

G02B5/14 G06K19/00 G06K7/10

G06K7/10881 G06K19/06018 G06K2019/06243

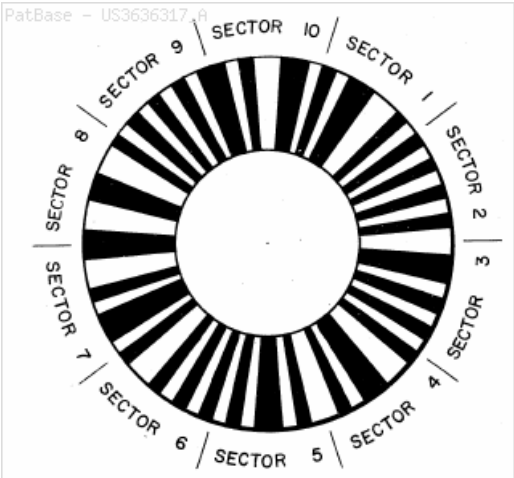
G06K19/06C1 G06K7/10S9F S06K19/06W6

235/462.03 235/462.18 235/473 235/491 235/494 235/61.11E 235/61.12N 250/227 250/227.26 250/566

[Classification Explorer](#)

WO9524018, WO0008489, WO0008489, USRE29449, US9811704, US9582699, US9268984, US8777107, US7262792, US7203367, US6802454, US6801245, US6747692, US6532297, US6225641, US5949068, US5554841, US5471533, US5337361, US5283422, US5260556, US5206492, US5124539, US5103081, US5099110, US5019764, US5003164, US4992717, US4894040, US4814589, US4758058, US4250405, US4228952, US4108368, US4059224, US3995146, US3991300, US3979839, US3979577, US3961160, US3947666, US3891831, US3882301, US3808405, US3794812, US3783245, US3770942, US3770940, US3755809, US3752961, US3735096, US2016232390, US2005282622, US2005164781, US2003174864, US2003121979, EP0837417, EP0216859, EP0032794,

**Abstract:**  
Encoded information is contained in a circular track having sector patterns formed by abutting segments. The segments are all of equal angular extent and extend around the track with each sector containing the same number of segments. Each segment has a binary value and the sequence of binary segments in a sector represents the encoded information. Each different sequence can, for example, represent a different decimal numeral. An encoded "start" sector is employed that is not duplicated by any sequence of segments that can occur from assembling the decimal coded sectors in any order whatsoever. The circular track is thereby assured of containing within it only one "start" pattern regardless of the other information encoded in the track. The sector codes are chosen so that when the sectors are assembled in abutting relation, no more than two like valued segments occur in succession in the track. The transitions between differently valued segments provide the timing information for decoding the markings.





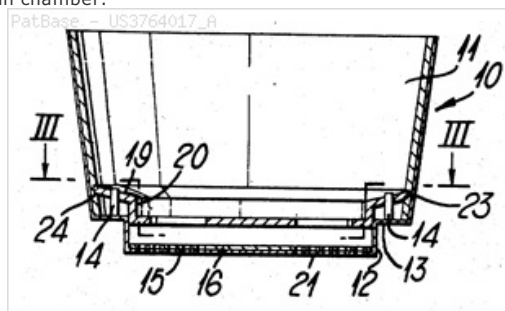
**Title:** INFUSION FILTER  
**Priority:** CA19710104468 19710204  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA900870 A         | 19720523         | CA19710104468      | 19710204         |
| US3764017 A        | 19731009         | US19710171201      | 19710812         |

**Probable Assignee:** DOVER S PER KUP LTD  
**Assignee(s):(std):** DOVER S PER KUP LTD ; INT TRAVEL AND TRANSPORTATION CO  
**Assignee(s):** INT TRAVEL AND TRANSPORTATION CO LTD GB ; JAY L DOVER  
**Inventor(s):(std):** DOVER J ; DOVER JAY L  
**Inventor(s):** DOVER J CA ; JAY L DOVER  
**International class** A47J31/02 B65D81/00 B65D85/804 (Advanced/Invention);  
**(IPC 8-9):** A47J31/02 B65D81/00 B65D85/804 (Core/Invention)  
**International class** B01D35/02 B01D35/28  
**(IPC 1-7):**  
**CPC:** A47J31/02 B65D85/8043  
**European class:** A47J31/02 B65D81/00B3 B65D85/804B  
**US class:** 210/481 99/287  
[Classification Explorer](#)  
**Forward Citations:** WO8903653, US9290317, US5800707, US5259298, US4983410, US4256585, US4255265, US4116844, US2016280453, US2013156899, US2012024873, US2010051562, US2007193947, FR2235710, EP2284102, EP1992575, EP0361569,

**Abstract:**

1. 1. In an infusion filter including a main single open-ended frusto-conical chamber, an annular ledge integral with the closed end of said chamber at the end having the smaller diameter, a depending, auxiliary cylindrical chamber integral with said ledge and depending from said main chamber, said auxiliary cylindrical chamber having a perforated main bottom to which is fixed a filter disc, the auxiliary chamber being of smaller diameter than said main chamber, and a perforated retaining disc mounted within said main chamber adjacent said auxiliary chamber, the improvement comprising: providing said retaining disc with a central depressed portion of slightly less diameter than the diameter of said depending auxiliary cylindrical chamber and adapted, prior to infusion use of said filtering device, to be disposed in force-fit contact within said auxiliary cylindrical chamber, the bottom of said central depressed portion being in contact with said infusion material to retain said infusion material in said auxiliary cylindrical chamber and said central depressed portion during infusion use being forced upwardly and raised out of said depending auxiliary cylindrical chamber to be disposed mainly in said main chamber.

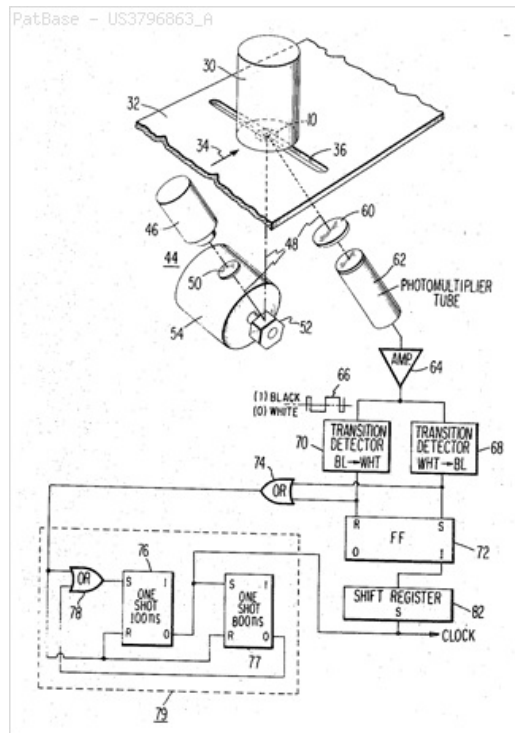


**Title:** OPTICAL SCANNING ARRANGEMENT AND ARTICLE USEFUL THEREWITH**Priority:** GB19710007590 19710323 GB19710007591 19710323 US19720218972 19720119  
AU19720040069 19720316 CA19720137314 19720316 CA19740195928 19740322

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AU197240069 A1     | 19730920         | AU19720040069      | 19720316         |
|         | AU473991 B2        | 19760708         | AU19720040069      | 19720316         |
|         | CA1075815 A1       | 19800415         | CA19740195928      | 19740322         |
|         | CA1075815 A2       | 19800415         | CA19740195928      | 19740322         |
|         | CA969277 A1        | 19750610         | CA19720137314      | 19720316         |
|         | CH558958 A         | 19750214         | CH19720004292      | 19720322         |
|         | CH588741 A         | 19770615         | CH19720015884      | 19720322         |
|         | DE2212809 A1       | 19720928         | DE19722212809      | 19720316         |
|         | DE2212809 B2       | 19740711         | DE19722212809      | 19720316         |
|         | DE2212809 C3       | 19750306         | DE19722212809      | 19720316         |
|         | DE2264417 A1       | 19730927         | DE19722264417      | 19720316         |
|         | DE2264417 B2       | 19741017         | DE19722264417      | 19720316         |
|         | DE2264417 C3       | 19750703         | DE19722264417      | 19720316         |
|         | FR2131576 A5       | 19721110         | FR19720010268      | 19720323         |
|         | GB1392924 A        | 19750507         | GB19710007590      | 19710323         |
|         | IT953553 A         | 19730810         | IT19720022290      | 19720322         |
|         | JP52135223 A2      | 19771112         | JP19760118934      | 19761001         |
|         | JP53031337 B4      | 19780901         | JP19720029348      | 19720322         |
|         | NL7203825 A        | 19720926         | NL19720003825      | 19720322         |
|         | SE400842 B         | 19780410         | SE19720003676      | 19720322         |
|         | SE400842 C         | 19780720         | SE19720003676      | 19720322         |
|         | US3796863 A        | 19740312         | US19720218972      | 19720119         |

**Probable Assignee:** RCA CORP**Assignee(s):(std):** RCA CORP**Assignee(s):** RCA CORP NEW YORK N Y V ST A ; RCA CORP US ; SCHANNE JOSEPH F ; NICKL FRANKLYN G**Inventor(s):(std):** ERF GERVE ANDREAS DR ING ; ESSIG GUNDER DIPL ING ; FURANKURIN JIYOOJI NIKURU ; GEORGE NICKL FRANKLYN ; HERKERT BERNHARD DIPL ING ; FRANCIS SCHANNE JOSEPH ; JIYOZEFU FURANSHISU SHIYANNE ; NICKL F ; NICKL F G ; NICKL FRANKLYN G ; NICKL FRANKLYN GEORGE ; SCHANNE JOSEPH F ; SCHANNE JOSEPH FRANCIS ; SCHANNE J ; SCHANNE J F**Inventor(s):** SCHANNE J US ; SCHANNE JOSEPH FRANCIS CHELTENHAM PA ; WIRD SPAETER GENANNT WERDEN ; NICKL FRANKLYN GEORGE NORTHBORO MASS ; NICKL F US ; JOSEPH FRANCIS SCHANNE ; L FRANKLYN GEORGE NICKL AND 2 JOSEPH FRANCIS SCHANGE ; FRANKLYN GEORGE NICKL ; J F SCHANNE ; F G NICKL**International class** G06K19/06 G06K7/10 (Advanced/Invention);  
(IPC 8-9): G06K19/06 G06K7/10 (Core/Invention)**International class** B65B31/04 G06K1/12 G06K19/00 G06K19/06 G06K7/10 G06K7/12 G06K7/14 G08C9/06 G09F3/00  
(IPC 1-7): G11B7/08**CPC:** G06K7/10871 G06K19/06018 G06K2019/06243 G06K19/06009**European class:** G06K19/06C G06K19/06C1 G06K7/10S9E1 S06K19/06W6**US class:** 235/462.19 235/462.28 235/474 235/494 250/568[Classification Explorer](#)**Cited documents:** JP44012927 A2, JP43025170 A2,**Forward Citations:** WO9007162, WO13072351, WO06005388, US9582699, US9268984, US8523076, US7740175, US7510118, US7422156, US7374094, US7341192, US7314176, US7296748, US7000838, US6845910, US6669091, US6431446, US6332573, US6299065, US6206289, US6155489, US5828049, US5686717, US5565670, US5548107, US5466921, US5343027, US5260556, US5157243, US5124538, US4064390, US4019026, US4007377, US4004131, US2009121023, US2007007350, US2006283954, US2005109849, US2005109847, US2004182931, US2002179710, RU2602048, JP6195526, GB2239545, GB2239545, FR2582317, FR2480980, FR2422183, EP3047765, EP2594171, EP0211789, DE2549087, DE10116239, CN103945739, CN103945739, AU2012338917, AT393747,**Abstract:**

A machine readable binary encoded label having preamble, data and end sections comprising concentric annuli of two different reflectivities. The width of each annulus is an integral multiple N of some unit width. By limiting N to not greater than some given value, the data on the label, when read by optical scanning equipment which can detect transitions between reflectivities, provides the transition signals needed to resynchronize the scanning equipment clock circuitry. 3 Claims, 4 Drawing Figures



Title:

OPTICAL CHARACTER READING SYSTEM AND BAR CODE FONT THEREFOR

Priority:

US19710118771 19710225      US19720252335 19720511

Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US3744025 A        | 19730703         | US19710118771      | 19710225         |
| US3832686 A        | 19740827         | US19720252335      | 19720511         |

Probable Assignee:

BILGUTAY I

Assignee(s):(std):

BILGUTAY I

Assignee(s):

BILGUTAY I US

Inventor(s):(std):

BILGUTAY I

Inventor(s):

BILGUTAY I US

International class (IPC 8-9):

G06K7/10 G06K9/03 G06K9/18 H03K19/173 (Advanced/Invention)

International class (IPC 1-7):

G06K9/18

CPC:

G06K7/10881 G06K9/03 G06K9/183 H03K19/173

European class:

G06K7/10S9F G06K9/03 G06K9/18C H03K19/173

US class:

235/436 235/437 235/462.16 235/462.28 235/462.49 235/473 235/494 382/184 382/289 382/309 382/314 382/321 385/119

Classification Explorer

Cited documents:

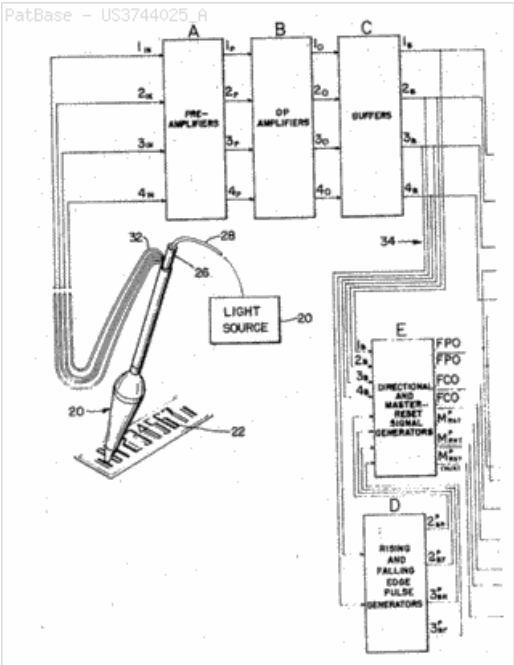
US3585589 A, US3509534 A, US3483511 A, US3426325 A, US3417234 A, US3328761 A, US3303469 A, US3277283 A, US3165718 A, US3044696 A,

Forward Citations:

US9868588, US8332793, US8285791, US8176458, US8023718, US7461365, US6460766, US6366696, US6236735, US6108197, US6097607, US6032863, US5880451, US5798907, US5581492, US5572401, US5565670, US5555490, US5550929, US5491651, US5471549, US5416310, US5304786, US5270524, US5256866, US5138140, US5038393, US4785357, US4685138, US4654718, US4260979, US4251800, US4224508, US4205781, US4183465, US4127770, US4118687, US4048617, US3964022, US3918029, US3873973, US3869599, US2014328977, US2014295032, US2009293035, US2009254874, FR2644910, FR2397021, EP0031502, EP0031502,

Abstract:

An optical character reading system comprising a hand-held probe device for scanning a printed font to produce an output adapted for driving a printed readout display or producing digital inputs to data storage or computing apparatus. The font is comprised of bar code symbols which can form humanly recognizable alphanumeric characters. At the tip of the probe device are means for transmitting a bright light and means for receiving reflected light at spaced apart windows. The light receiving means of each window is connected to an electrical signal producing element so that as the device scans over a series of characters, each window "sees" the reflective and non-reflective areas and output signals are produced which provide information as to the relative locations of reflective and non-reflective areas and also the number of non-reflective edges passed during scanning and these signals provide input data to logic circuitry that includes means for compensating for variations in the direction of scanning or orientation of the probe with respect to the character block; means for identifying variables and characters of the printing font and for producing and storing representative data outputs and also error-checking components for assuring the accuracy of the data outputs.



**Title:** Apparatus for identifying production codes on articles  
**Priority:** GB19420037978 19781030 GB19780042379 19781030  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU197951852 A1     | 19800508         | AU19790051852      | 19791016         |
| BE879704 A         | 19800429         | BE19790197871      | 19791029         |
| DE2943811 A1       | 19800529         | DE19792943811      | 19791030         |
| FR2440583 A1       | 19800530         | FR19790026787      | 19791029         |
| GB2033120 A1       | 19800514         | GB19780042379      | 19781030         |
| GB2033120 B2       | 19820714         | GB19780042379      | 19781030         |
| IT1124818 A        | 19860514         | IT19790026893      | 19791029         |
| IT7926893 A0       | 19791029         | IT19790026893      | 19791029         |
| US4250405 A        | 19810210         | US19790089561      | 19791029         |

**Probable Assignee:** UNITED GLASS LTD  
**Assignee(s):(std):** UNITED GLASS LTD  
**Inventor(s):(std):** ASHCROFT RICHARD I ; ASHCROFT RICHARD IAN ; KAKTOVICS DAVID ; MONSON ANTHONY E ; MONSON ANTHONY EDWARD PHILLIP ; WEEKS DAVID M ; WEEKS DAVID MICHAEL ; PHILLIP MONSON ANTHONY EDWARD ; MICHAEL WEEKS DAVID ; IAN ASHCROFT RICHARD ; DAVID KAKTOVICS  
**Inventor(s):** ANTHONY EDWARD PHILLIP MONSON ; DAVID MICHAEL WEEKS ; RICHARD IAN ASHCROFT  
**Agent(s):** DAVIES AND COLLISON  
**International class** B07C5/34 (Advanced/Invention);  
**(IPC 8-9):** B07C5/34 (Core/Invention)  
**International class** B07C5/34 G06K19/06 G06K7/00 G06K7/14 G07C3/00 G07C7/00  
**(IPC 1-7):**  
**CPC:** B07C5/3412  
**European class:** B07C5/34B  
**US class:** 235/456 235/462.03 235/494

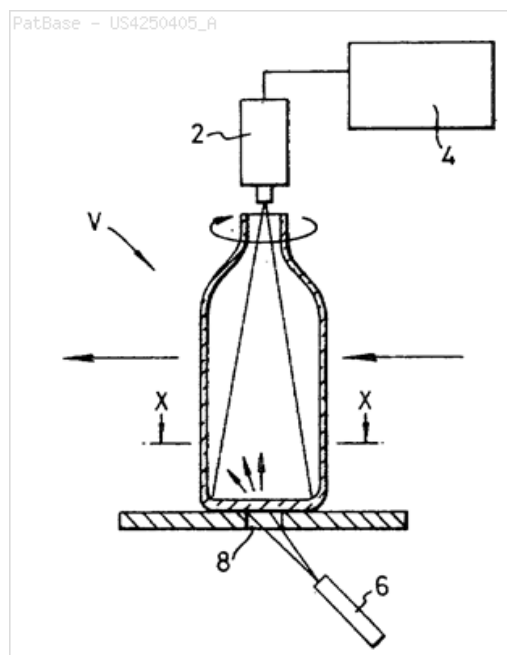
[Classification Explorer](#)

**Cited documents:** US4044227 A, US3923158, US3898433, US3761725, US3757090, US3745314 A, US3636317, US3418456, FR2270018 A1,

**Forward Citations:** WO9007162, WO14096405, US9811704, US9582699, US9268984, US7106889, US7106889, US6118581, US6091842, US6089455, US6028302, US6006995, US5963368, US5930732, US5808284, US5798514, US5718457, US5690892, US5612525, US5473152, US5301238, US5260556, US4967070, US4636623, US4493989, US4463251, US4449042, US2016232390, TR25234, GB2196767, GB2196767, GB2154775, EP1246127, EP0694870, EP0516956, EP0465775, EP0136116, EP0136116, EP0136116, EP0094800, EP0094800, DE4027992, DE3637210, DE19537341, AU653720, AU630408, AU587932, AU587932,

#### Abstract:

The apparatus is particularly suited for identifying mould cavity numbers formed in binary code in the stippling on the base of glass containers. It comprises light beam detection means (2), such as a photodiode array, which scans an area of the article to provide an output characteristic of the code; means (12) are provided for creating at least one window in time within each scan period by selecting which diodes in the array commence and terminate the window. Only output signals from the light beam detection means within the window in time are decoded to provide the code on the article. Preferably, the window is selected manually, e.g. by thumbwheel stores (14), and, further, a true decoding is arranged to arise for "1" in the binary code (presence of a stippling mark) only if a predetermined number of photodiodes within the window are activated at any one time. This true decoding reduces errors due to refraction of light from defects in the glass. The predetermined number of photodiodes may also be selected manually e.g. by thumbwheel stores (22).



Title:

Fiber optic bar code reader

Priority:

US19800123039 19800220

Family:

| Publication number                                                                            | Publication date | Application number | Application date |
|-----------------------------------------------------------------------------------------------|------------------|--------------------|------------------|
|  US4286145 A | 19810825         | US19800123039      | 19800220         |

Probable Assignee:

GEN DYNAMICS POMONA DIV

Assignee(s):(std):

GEN DYNAMICS POMONA DIV ; GEN DYNAMICS POMONA DIVISION

Assignee(s):

GENERAL DYNAMICS POMONA DIVISION ; HUGHES MISSILE SYSTEMS CO

Inventor(s):(std):

PALMER JOHN P

International class (IPC 8-9):

G06K7/10 (Advanced/Invention);  
G06K7/10 (Core/Invention)

International class (IPC 1-7):

G06K7/10 G06K7/14

CPC:

G06K7/10762

European class:

G06K7/10S4M

US class:

235/454 235/462.49 235/473

[Classification Explorer](#)

Cited documents:

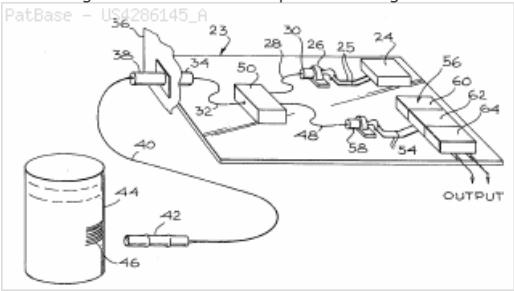
US3987278 A, US3937558 A, US3814933 A, US3766364 A, US3763352 A, US3671722 A, US3610891 A, US3584789 A, US3576430 A,

Forward Citations:

WO9963387, WO8803685, USD460068, US9335532, US9158951, US8915439, US8910876, US8746563, US8485445, US8390909, US8294969, US8261994, US8261993, US8059324, US8002183, US6866196, US6853293, US6811088, US6584052, US6341118, US5956447, US5821524, US5610387, US5521367, US5514861, US5422469, US5319182, US5306901, US4967071, US4847490, US4807955, US4780600, US4780599, US4766298, US4533926, US2017174419, US2007291798, US2007119947, US2002000470, EP0302617, EP0140411, EP0140411,

Abstract:

A fiber optic bar code reader utilizing a light source coupled to one port of a three-port directional coupler. A light detector is coupled to a second port of the coupler, a single fiber probe for receiving and transmitting light is coupled to the third port of the coupler. The coupler joins the three fibers so that light is initially transmitted from the light source to the probe fiber, exits the probe fiber, is selectively reflected by the bar code, and finally is transmitted through the directional coupler to the light detector.

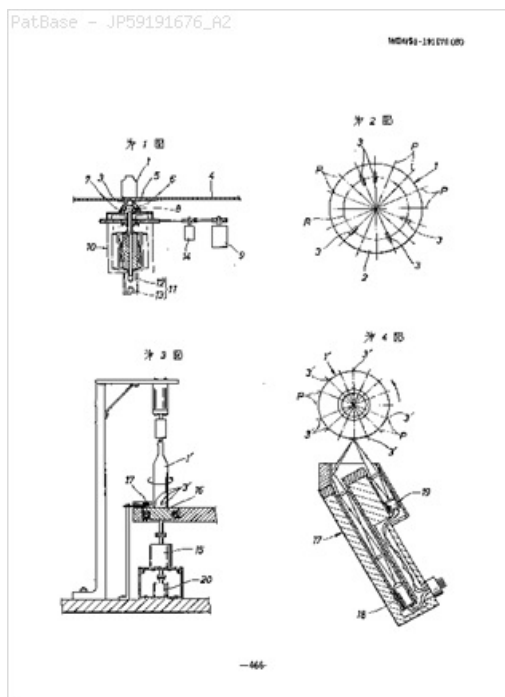


**Title:** CONTAINER CODE IDENTIFYING METHOD**Priority:** JP19830066320 19830416**Family:**

|   | Publication number | Publication date | Application number | Application date |
|---|--------------------|------------------|--------------------|------------------|
| ■ | JP1442718 C3       | 19880608         | JP19830066320      | 19830416         |
| ■ | JP59191676 A2      | 19841030         | JP19830066320      | 19830416         |
| ■ | JP62048878 B4      | 19871015         | JP19830066320      | 19830416         |

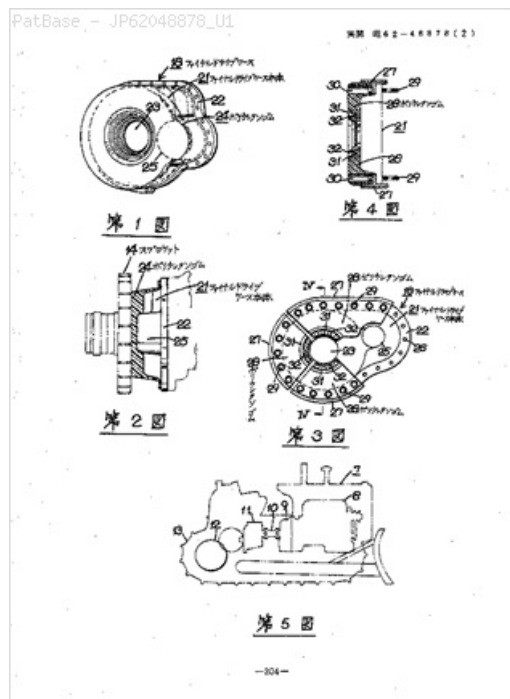
**Probable Assignee:** TOYO GLASS CO LTD**Assignee(s):(std):** TOYO GLASS CO LTD**Assignee(s):** TOUYOU GLASS KK**Inventor(s):(std):** KURIBAYASHI YUKIYOSHI**Inventor(s):** KURIBAYASHI YUKYOSHI**International class (IPC 8-9):** B07C3/18 B07C5/342 B65G47/48 B65G47/49 G06K19/00 G06K7/10 (Advanced/Invention); B07C3/00 B07C5/342 B65G47/48 G06K19/00 G06K7/10 (Core/Invention)**International class (IPC 1-7):** B07C3/20 B07C5/342 B65G47/48 B65G47/49 G06K19/06 G06K7/10**CPC:** G06K7/10861 B65G2201/0244**European class:** G06K7/10S9E L65G201/02F6[Classification Explorer](#)**Cited documents:** JP53001047 A2, JP49003301 A2,**Forward Citations:** US9868588, KR101900509, JP63003392, JP61278980, JP3065776, JP2061821, JP2015502201, JP2014533159, JP2014533156, JP2013526317, JP2013526316,**Abstract:**

**PURPOSE:**To detect and identify accurately a code despite of the revolving speed of a container by arraying the digitized marks on a circular track on the outer surface of the container with the patterns different from each other in the direction orthogonal to said circular track and then detecting those marks. **CONSTITUTION:**Two long and short code marks are put on a glass bottle at the lower edge part of the outer circumferential surface of the body part of the bottle orthogonally to the circular track of the outer circumferential surface of a container. When this bottle is positioned at the 1st check point, an input timing signal is fed to a microcomputer 35. Therefore the code read data is fed via a data input port 36 and stored first to a present value register 37. The contents of the register 37 are compared with those of a preceding value register 38 through a comparator 39 and then stored successively to a data memory 41. This procedure is repeated 10 times to obtain a 10-bit code with 10 marks. Owing to this 10-bit code data, the code can be detected and identified accurately despite the variation of revolving speed of the glass bottle.



**Title:** [huainarudoraibuke] - [su] (Machine translation)**Priority:** JP19850141819U 19850917**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| JP1838091 Y        | 19910221         | JP19850141819U     | 19850917         |
| JP2010061 Y2       | 19900313         | JP19850141819U     | 19850917         |
| JP62048878 U1      | 19870326         | JP19850141819U     | 19850917         |

**International class**  
(IPC 8-9): B62D55/088 B62D55/12 B62D55/125 (Advanced/Invention)**International class**  
(IPC 1-7): B62D55/088 B62D55/12 B62D55/125[Classification Explorer](#)**Cited documents:** JP48087938 U1,**Forward Citations:** JP2012179926,

**Title:** HEXAGONAL, INFORMATION ENCODING ARTICLE, PROCESS AND SYSTEM

**Priority:** US19880330111 19880331 US19880178600 19880408 US19890330111 19890331  
 IN1989CA00253 19890403 CA19890595977 19890406 NZ19890228634 19890406  
 EP19890303467 19890407 GB19890007887 19890407 GB19890007888 19890407  
 IE19890001126 19890407 AU19890032600 19890410 DE19893911702 19890410  
 US19890438571 19891116 FR19910010582 19910823 GB19920005887 19920311  
 AU19930031151 19930113 AU19950014831 19950315

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AR245837 A1        | 19940228         | AR19890313633      | 19890407         |
|         | AT117444 E         | 19950215         | AT19890303444T     | 19890407         |
|         | AT131644 E         | 19951215         | AT19890303467T     | 19890407         |
|         | AT169756 E         | 19980815         | AT19890202497T     | 19890407         |
|         | AU198932600 A1     | 19891012         | AU19890032600      | 19890410         |
|         | AU199331151 A1     | 19930422         | AU19930031151      | 19930113         |
|         | AU199514831 A1     | 19950601         | AU19950014831      | 19950315         |
|         | AU199652460 A1     | 19960801         | AU19960052460      | 19960523         |
|         | AU629823 B2        | 19921015         | AU19890032600      | 19890410         |
|         | AU655522 B2        | 19941222         | AU19930031151      | 19930113         |
|         | AU668332 B2        | 19960426         | AU19950014831      | 19950315         |
|         | AU675199 B2        | 19970123         | AU19960052460      | 19960523         |
|         | BRPI8901666 A      | 19891121         | BR1989PI01666      | 19890407         |
|         | CA1329953 A1       | 19940531         | CA19890595977      | 19890406         |
|         | CN1032232 C        | 19960703         | CN19891002222      | 19890407         |
|         | CN1039672 A        | 19900214         | CN19891002222      | 19890407         |
|         | DE3911702 A1       | 19891130         | DE19893911702      | 19890410         |
|         | DE3911702 C2       | 19930527         | DE19893911702      | 19890410         |
|         | DE3943563 C2       | 19940526         | DE19893943563      | 19890410         |
|         | DE3943680 C2       | 19940601         | DE19893943680      | 19890410         |
|         | DE68920617 D1      | 19950302         | DE19896020617      | 19890407         |
|         | DE68920617 T2      | 19950601         | DE19896020617T     | 19890407         |
|         | DE68925059 D1      | 19960125         | DE19896025059      | 19890407         |
|         | DE68925059 T2      | 19961017         | DE19896025059T     | 19890407         |
|         | DE68928785 D1      | 19980917         | DE19896028785      | 19890407         |
|         | DE68928785 T2      | 19990429         | DE19896028785T     | 19890407         |
|         | DK169689 A         | 19891009         | DK19890001696      | 19890407         |
|         | DK169689 A0        | 19890407         | DK19890001696      | 19890407         |
|         | DK175729 B1        | 20050207         | DK20040001403      | 20040915         |
|         | DK175742 B1        | 20050207         | DK19890001696      | 19890407         |
|         | DK175743 B1        | 20050207         | DK20040001404      | 20040915         |
|         | DK200401403 A5     | 20040915         | DK20040001403      | 20040915         |
|         | DK200401404 A5     | 20040915         | DK20040001404      | 20040915         |
|         | EP0336769 A2       | 19891011         | EP19890303444      | 19890407         |
|         | EP0336769 A3       | 19910206         | EP19890303444      | 19890407         |
|         | EP0336769 B1       | 19950118         | EP19890303444      | 19890407         |
|         | EP0336778 A2       | 19891011         | EP19890303467      | 19890407         |
|         | EP0336778 A3       | 19910130         | EP19890303467      | 19890407         |
|         | EP0336778 B1       | 19951213         | EP19890303467      | 19890407         |
|         | EP0573129 A2       | 19931208         | EP19930202497      | 19890407         |
|         | EP0573129 A3       | 19940518         | EP19930202497      | 19890407         |
|         | EP0573129 B1       | 19980812         | EP19930202497      | 19890407         |
|         | ES2013427 AF       | 19900501         | ES19890001231      | 19890407         |
|         | ES2067535 T3       | 19950401         | ES19890303444T     | 19890407         |
|         | ES2082772 T3       | 19960401         | ES19890303467T     | 19890407         |
|         | ES2120475 T3       | 19981101         | ES19930202497T     | 19890407         |
|         | FR2635208 A1       | 19900209         | FR19890004629      | 19890407         |
|         | FR2635208 B1       | 19940701         | FR19890004629      | 19890407         |
|         | FR2665970 A1       | 19920221         | FR19910010582      | 19910823         |
|         | FR2665970 B1       | 19931015         | FR19910010582      | 19910823         |
|         | GB2218238 A1       | 19891108         | GB19890007887      | 19890407         |
|         | GB2218238 B2       | 19930217         | GB19890007887      | 19890407         |
|         | GB2218239 A1       | 19891108         | GB19890007888      | 19890407         |
|         | GB2218239 B2       | 19921028         | GB19890007888      | 19890407         |
|         | GB2252189 A1       | 19920729         | GB19920005887      | 19920311         |
|         | GB2252189 B2       | 19930217         | GB19920005887      | 19920311         |
|         | GB2252653 A1       | 19920812         | GB19920005391      | 19920311         |
|         | GB2252653 B2       | 19921028         | GB19920005391      | 19920311         |
|         | GB2255848 A1       | 19921118         | GB19920016187      | 19920730         |
|         | GB2255848 B2       | 19930217         | GB19920016187      | 19920730         |
|         | GB2256299 A1       | 19921202         | GB19920016786      | 19920807         |
|         | GB2256299 B2       | 19930217         | GB19920016786      | 19920807         |
|         | GB2256300 A1       | 19921202         | GB19920016787      | 19890407         |
|         | GB2256300 B2       | 19930217         | GB19920016787      | 19890407         |
|         | GB2256517 A1       | 19921209         | GB19920016587      | 19890407         |
|         | GB2256517 B2       | 19930217         | GB19920016587      | 19890407         |
|         | GB8907887 A0       | 19890524         | GB19890007887      | 19890407         |
|         | GB8907888 A0       | 19890524         | GB19890007888      | 19890407         |
|         | GB9205388 A0       | 19920422         | GB19920005388      | 19920311         |

|                 |          |                |          |
|-----------------|----------|----------------|----------|
| GB9205391 A0    | 19920422 | GB19920005391  | 19920311 |
| GB9205887 A0    | 19920429 | GB19920005887  | 19920311 |
| GB9216187 A0    | 19920909 | GB19920016187  | 19920730 |
| GB9216587 A0    | 19920916 | GB19920016587  | 19890407 |
| GB9216786 A0    | 19920923 | GB19920016786  | 19920807 |
| GB9216787 A0    | 19920923 | GB19920016787  | 19890407 |
| GR3015828 T3    | 19950731 | GR19950400958T | 19950417 |
| GR3019304 T3    | 19960630 | GR19960400711T | 19960313 |
| GR920300004 T1  | 19920825 | GR19920300004T | 19920825 |
| GR920300006 T1  | 19920825 | GR19920300006T | 19920825 |
| IE66487 B       | 19960110 | IE19890001084  | 19890405 |
| IE75212 B       | 19970827 | IE19890001126  | 19890407 |
| IE80888 B       | 19990519 | IE19960000903  | 19890407 |
| IE891084 L      | 19891008 | IE19890001084  | 19890405 |
| IE891126 L      | 19891008 | IE19890001126  | 19890407 |
| IE960903 L      | 19891008 | IE19960000903  | 19890407 |
| IL89866 A0      | 19891215 | IL19890089866  | 19890406 |
| IL89866 A1      | 19960331 | IL19890089866  | 19890406 |
| IN00661CA1992 A | 20080620 | IN1992CA00661  | 19920914 |
| IN00662CA1992 A | 20080620 | IN1992CA00662  | 19920914 |
| IN00749CA1992 A | 20080620 | IN1992CA00749  | 19921015 |
| IN00750CA1992 A | 20080620 | IN1992CA00750  | 19921015 |
| IN172293 A      | 19930605 | IN1989CA00253  | 19890403 |
| IT1235425 A     | 19920709 | IT19890020057  | 19890407 |
| IT8920057 A0    | 19890407 | IT19890020057  | 19890407 |
| JP2056091 A2    | 19900226 | JP19890090515  | 19890410 |
| JP2742701 B2    | 19980422 | JP19890090515  | 19890410 |
| KR19900016958 A | 19901115 | KR19890004685  | 19890408 |
| KR970006647 B1  | 19970429 | KR19890004685  | 19890408 |
| LT3516 B        | 19951127 | LT19930000624  | 19930607 |
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| LT624 A         | 19950425 | LT19930000624  | 19930607 |
| LT626 A         | 19950425 | LT19930000626  | 19930607 |
| LV10820 A       | 19950820 | LV19930000451  | 19930601 |
| LV10820 B       | 19951220 | LV19930000451  | 19930601 |
| LV10821 A       | 19950820 | LV19930000455  | 19930601 |
| LV10821 B       | 19951220 | LV19930000455  | 19930601 |
| MD1031 F2       | 19980930 | MD19940000155  | 19940621 |
| MD1031 G2       | 19991031 | MD19940000155  | 19940621 |
| MD1081 F2       | 19981031 | MD19950000008  | 19940707 |
| MD1081 G2       | 20000229 | MD19950000008  | 19940707 |
| MD940155 A      | 19951231 | MD19940000155  | 19940621 |
| MD950008 A      | 19960131 | MD19950000008  | 19940707 |
| MX167941 B      | 19930423 | MX19890015576  | 19890407 |
| NZ228634 A      | 19961126 | NZ19890228634  | 19890406 |
| NZ241291 A      | 19961126 | NZ19890241291  | 19890406 |
| NZ260173 A      | 19961126 | NZ19890260173  | 19890406 |
| PT90234 A       | 19891110 | PT19890090234  | 19890407 |
| RU2078375 C1    | 19970427 | SU19894613929  | 19890407 |
| RU2081453 C1    | 19970610 | SU19894614048  | 19890407 |
| US4874936 A     | 19891017 | US19880178600  | 19880408 |
| US4896029 A     | 19900123 | US19890330111  | 19890331 |
| US4998010 A     | 19910305 | US19890438571  | 19891116 |
| WO8909979 A1    | 19891019 | WO1989US01470  | 19890407 |

**Probable Assignee:** UNITED PARCEL SERVICES GENERAL SERVICES CO

**Assignee(s):(std):** SKW METALS UK LTD ; ROCHE PRODUCTS LTD ; UNITED PARCEL SERVICE INC ; UNITED PARCEL SERVICE OF AMERICA INC ; UNITED PARCEL SERVICE AMERICA ; UNITED PAASERU SERVICE OBU AME ; UNITED PARCEL SERVICE OF AMERI ; YUNAJTED PARSEL SERVIS OF AMERIKA INK ; UNITED PARCEL SERVICE AMERICA INC

**Assignee(s):** UNITED PARCEL SERVICE OF AMERICA INC A DE CORP ; UNITED PARCEL SERVICE OF AMERICA INC ATLANTA GA US ; UNITED PARCEL SERVICE OF AMERICA INC GREENWICH CONN US ; UNITED PARCEL SERVICE OF AMERICA INC GREENWICH CONN ; UNITED PARCEL SERVICES GENERAL SERVICES CO ; UNITED PAASERU SERVICE OBU AMERICA INC ; SKW METALS UK LIMITED ; UNITED PARCEL SERVICE GENERAL SERVICES CO ; UNITED PARCEL SERVICE AMERICA IN ; SHAH GOVIND ; UNITED PARCEL SERVICE ; BATTERMAN ERIC PAUL ; CHANDLER DONALD GORDON ; JUNAJTED PARSEL SERVIS OF AMERIKA, INK. ; PA CONSULTING SERVICES INC ; ROCHE PRODUCTS LIMITED

**Inventor(s):(std):** PAUL BATTERMANN ERIC ; PAUL BATTERMAN ERIC ; PAUL ; GOVIND SHAKH ; GOVID SHAH ; GORDON CHANDLER DONALD ; GORDON ; ERIK POL BATTERMAN ; ERIC P BATTERMAN ; ERIC BATTERMAN ; SHAH GOVIND ; GOVIND SHAH ; ERIC PAUL BATTERMAN ; DONALD GORDON CHANDLER ; DONALD GORDAN CHANDLER ; DONALD G CHANDLER ; DONALD CHANDLER ; DONALD GORDON CHENDLER ; CHANDLER DONALD GORDON ; CHANDLER DONALD GORDAN ; CHANDLER DONALD G ; BATTERMAN ERIC PAUL ; BATTERMAN ERIC P

**Inventor(s):** BEFORE PATENTS AMENDMENT ACT 2005 NO ; BATTERMANN ERIC PAUL ; BATTERMAN ERIC PAUL CHERRY HILL NEW JERSEY 08034 US ; BATTERMAN ERIC PAUL CHERRY HILL NEW JERSEY 08034 U ; BATTERMAN ERIC PAUL CHERRY HILL NEW JERSEY ; BATTERMAN ERIC PAUL CHERRY HILL CAMDEN N J ; BATTERMAN ERIC PAUL CAMDEN COUNTY NJ ; BATTERMAN ERIC PAUL CAMDEN COUNTY NEW JERSEY 08034 US ; BATTERMAN ERIC PAUL CAMDEN COUNTY NEW JERSEY 08034 ; BATTERMAN ERIC PAUL CAMDEN COUNTY NEW JERSEY ; BATTERMAN ERIC PAUL CAMDEN COUNTY N J ; CHANDLER DONALD GORDON PENNINGTON MERCER N J ; DONAL'D GORDON CHEHNDLER[US] ; DONALD GORDON CHANDLER ERIC PAUL BATTERMAN ; CHANDLER DONALD GORDON PENNINGTON NEW JERSEY 08534 US ; CHANDLER DONALD GORDON PENNINGTON NEW JERSEY 08534 ; CHANDLER DONALD GORDON PENNINGTON NEW JERSEY 08034 US ; CHANDLER DONALD GORDON PENNINGTON NEW JERSEY ; CHANDLER DONALD GORDON MERCER COUNTY NJ ; CHANDLER DONALD GORDON MERCER COUNTY NEW JERSEY 08034 US ; CHANDLER DONALD GORDON MERCER COUNTY NEW JERSEY 08 ; CHANDLER DONALD GORDON MERCER COUNTY

NEW ; CHANDLER DONALD GORDON MERCER COUNTY N J ; EHRIC POL BATTERMAN[US] ; DONARUDO GOODON CHIYANDORAA ; GOBINDO SHIYAA ; ERITSUKU POORU BATSUTAAMAN ; GOVIND SHAKH[IN] ; SHAH GOVIND PRINCTON JUNCTION MERCER N J ; SHAH GOVIND PRINCETON JUNCTION NEW JERSEY 08552 US ; SHAH GOVIND MERCER COUNTY NJ ; SHAH GOVIND MERCER COUNTY NEW JERSEY 08552 US ; SHAH GOVIND MERCER COUNTY N J

**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; MCCARTHY TETRAULT LLP; REINHOLD COHN AND PARTNERS; GLAZUNOV NICOLAI

**Designated states:** AT BE BR CH DE DK ES FR GB GR IT JP KR LI LU NL SE SU

**International class (IPC 8-9):** G06F3/00 G06K1/12 G06K19/00 G06K19/04 G06K19/06 G06K7/00 G06K7/10 G06K7/14 G06K9/00 G09C5/00 G11B23/38 G11B7/24 (Advanced/Invention); G06K19/00 G06K7/00 (Advanced/Non-invention); G06F3/00 G06K19/04 G06K19/06 G06K7/00 G06K7/10 G06K9/00 G09C5/00 G11B23/38 G11B7/24 (Core/Invention); G06K (Subclass/Invention)

**International class (IPC 1-7):** B07C3/08 B07C3/10 B07C3/18 B07C5/34 B07C5/342 B65C9/46 G01B17/00 G06F3/00 G06F9/00 G06K G06K1/12 G06K19/00 G06K19/04 G06K19/06 G06K19/067/10 G06K19/16 G06K7/00 G06K7/10 G06K7/14 G06K9/00 G06K9/18 G06K9/28 G06K9/36 G06K9/62 G09F3/00 G09F3/02 G09F5/00 G11B23/38 G11B7/00 G11B7/24 H03M1/00 H04N1/10

**CPC:** Y10S283/901 G06K19/06037 G06K7/1093 G06K7/1417 G06K7/1443 G06K2019/06262

**European class:** G06K19/06C3 G06K7/10S9H G06K7/14A2C G06K7/14A4A S06K19/06W10

**US class:** 235/401 235/462.04 235/464 235/481 235/487 235/494 283/901

[Classification Explorer](#)

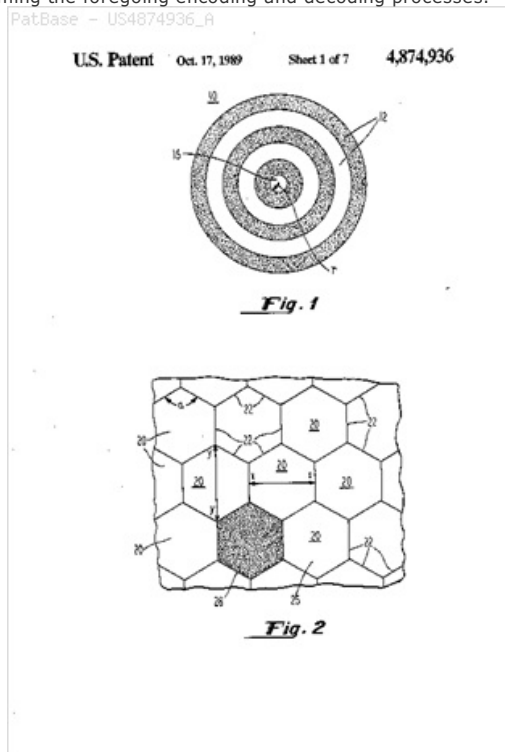
**Cited documents:** WO8605906 A1, US634850 A, US4736109, US4634850 A, US4634850, US4488679 A, US4488679, US4443694 A, US4443694, US4439672 A, US4286146 A, US4286146, US3985293 A, US3971917 A, US3971917, US3959631 A, US3916160 A, US3916160, US3916150 A, US3801775 A, US3801775, US3693154 A, US3693154, US3660641 A, US3603728 A, US3603728, US3603720 A, US3553438 A, US3553438, US3533438, US3513320 A, US3513320, JPS63271586, JPS62147136 U, JPS5547586, JPS5547586, JPS5154334, JPS5129617, JPS51134032, JP63271586 A2, JP62147136 U1, JP62147136 U, JP55047586 A2, JP55047586 A2, JP51134032 A2, JP51054334 A2, JP51029617 A2, GB906429 A, GB2228352 A1, GB1257163 A, GB1249545 A, GB1216539 A, EP0203659 A1, DE3717604 A1,

**Forward Citations:** WO9919823, WO9919823, WO9906308, WO9845799, WO9630217, WO9534043, WO9420925, WO9402857, WO9301566, WO9301566, WO9214239, WO9200576, WO15044686, WO12022678, WO09074979, WO09074979, WO05109327, WO05109327, WO05033656, WO05033656, WO04079642, WO04059483, WO04051557, WO0207065, WO0207065, WO0115063, USRE40919, USRE37925, US9990520, US9950117, US9811925, US9795869, US9778273, US9672009, US9659203, US9645729, US9599630, US9584681, US9560221, US9544451, US9522238, US9432529, US9406010, US9396421, US9384378, US9338312, US9323969, US9252955, US9237244, US9235554, US9229016, US9219832, US9197767, US9191530, US9191529, US9185247, US9185246, US9179020, US9168761, US9167109, US9154648, US9154647, US9148551, US9148530, US9143636, US9143635, US9141899, US9137398, US9137397, US9131083, US9124737, US9124736, US9124735, US9113010, US9113009, US9113008, US9113007, US9108430, US9106775, US9100516, US9092686, US9088675, US9083830, US9083829, US9060128, US9060081, US9055221, 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US8276051, US8262453, US8257968, US8256687, US8216512, US8215566, US8212857, US8197449, US8196838, US8196837, US8177136, US8165422, US8162220, US8154511, US8152070, US8150163, US8142739, US8141783, US8118235, US8109513, US8100340, US8073782, US8056900, US8049519, US8038538, US8033905, US8016187, US7997504, US7984858, US7982929, US7978876, US7967207, US7963446, US7960178, US7953112, US7946492, US7942340, US7937228, US7922096, US7905761, US7901941, US7886978, US7878413, US7878400, US7874902, US7874496, US7874485, US7852519, US7852223, US7837117, US7824257, US7773770, US7758809, US7758399, US7751585, US7726652, US7719580, US7699314, US7697719, US7676038, US7672513, US7662038, US7654529, US7648678, US7642093, US7631871, US7621814, US7621456, US7621453, US7614545, US7606533, US7601059, US7593545, US7588191, US7581683, US7578443, US7573599, US7564605, US7561717, US7561053, US7555139, US7550710, US7549595, US7546954, US7545359, US7519239, US7516904, US7486799, US7485037, US7481431, US7471828, 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# Abstract:

The article of the invention is an optically readable label for storing encoded information, said label comprising a data energy of a multiplicity of information-encoded hexagons contiguously arranged in a honeycomb pattern, and having at least two different optical properties. A process for encoding information in an optically-readable data array comprised of a honeycomb of contiguous hexagons encoded by assigning optical properties to individual hexagons in a predetermined pattern, ordering the hexagons in a predetermined sequence, and printing the hexagons with at least two optical properties. A process for retrieving information by optically scanning an information-encoded data array of contiguous polygons, preferably hexagons, creating an optical replica of the digital bit stream representative of the optical properties of the information encoded polygons, decoding that optical replica and retrieving the decoded bit stream. A stream for performing the foregoing encoding and decoding processes.



**Title:** Process for the production of 4,5-dichloro-6-ethylpyrimidine  
**Priority:** CH19880004306 19881121 CA19892002671 19891109  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT113587 E         | 19941115         | AT19890121242T     | 19891116         |
| CA2002671 AA       | 19900521         | CA19892002671      | 19891109         |
| CA2002671 C        | 19961203         | CA19892002671      | 19891109         |
| DE58908590 D1      | 19941208         | DE19895008590      | 19891116         |
| EP0370391 A2       | 19900530         | EP19890121242      | 19891116         |
| EP0370391 A3       | 19910109         | EP19890121242      | 19891116         |
| EP0370391 B1       | 19941102         | EP19890121242      | 19891116         |
| JP2180873 A2       | 19900713         | JP19890297258      | 19891115         |
| US4977264 A        | 19901211         | US19890433134      | 19891108         |

**Probable Assignee:** LONZA GROUP LTD  
**Assignee(s):(std):** LONZA GROUP LTD ; LONZA AG  
**Assignee(s):** LONZA AG BASEL CH ; LONZA LTD ; MILLS LESTER ; PREVIDOLI FELIX  
**Inventor(s):(std):** MILLS LESTER DR ; PREVIDOLI FELIX DR ; RESUTAA MIRUZU ; FUERITSUKUSU PUREBIDORI ; PREVIDOLI FELIX ; MILLS LESTER  
**Inventor(s):** PREVIDOLI FELIX DR BRIG KANTON WALLIS CH ; MILLS LESTER DR NATERS KANTON WALLIS CH  
**Agent(s):** G RONALD BELL AND ASSOCIATES  
**Designated states:** AT BE CH DE FR GB IT LI NL SE  
**International class (IPC 8-9):** C07D239/30 C07D239/36 (Advanced/Invention)  
**International class (IPC 1-7):** C07D239/30 C07D239/36  
**CPC:** C07D239/30  
**European class:** C07D239/30  
**US class:** 544/334

[Classification Explorer](#)

**Cited documents:** JP58222076 A2, GB1585950 A, EP0264217 A2,  
**Forward Citations:** WO9952880, WO9501963, WO15085935, WO14063642, WO0053586, US9682962, US9582699, US9447081, US9268984, US6521627, US6197729, US5523404, JP4526385, JP2005529184, EP1163230, AU698232,

**Abstract:**  
2-chloro-3-oxopentanoic acid alkyl ester is condensed with the addition of bases with formamidine salts into 5-chloro-6-ethyl-4-hydroxypyrimidine. The latter is converted with phosphoryl chloride into 4,5-dichloro-6-ethylpyrimidine.

**Title:** Optically readable coded target  
**Priority:** AU1988PJ02044 19881220 WO1989AU00551 19891220  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199048327 A1     | 19900710         | AU19900048327      | 19891220         |
| AU630408 B2        | 19921029         | AU19900048327      | 19891220         |
| EP0449889 A1       | 19911009         | EP19900900729      | 19891220         |
| EP0449889 A4       | 19921202         | EP19900900729      | 19891220         |
| JP5501020 T2       | 19930225         | JP19900501671T     | 19891220         |
| NZ231883 A         | 19930428         | NZ19890231883      | 19891220         |
| US5260556 A        | 19931109         | US19910690994      | 19910618         |
| WO9007162 A1       | 19900628         | WO1989AU00551      | 19891220         |

**Probable Assignee:** AUSTRALIAN MEAT AND LIVE STOCK  
**Assignee(s):(std):** AUSTRALIAN MEAT AND LIVE STOCK ; AUSTRALIAN MEAT AND LIVE STOCK R  
**Assignee(s):** AUSTRALIAN MEAT AND LIVE STOCK RESEARCH AND DEVELOPMEN ; AUSTRALIAN MEAT AND LIVE STOCK RESEARCH AND DEVELOPMENT CORP ; AUSTRALIAN MEAT AND LIVESTOCK RESEARCH AND DEVELOPMENT CORP  
**Inventor(s):(std):** KOWALD ERROL M ; KOWALD ERROL MAXWELL ; LAKE ROYDEN J ; LAKE ROYDEN JAMES WILLIAM ; MOORE JOHN C ; MOORE JOHN CHISNALL ; DOERR ANNEGRET  
**Inventor(s):** ERROL MAXWELL KOWALD ; JOHN CHISNALL MOORE ; ANNEGRET DOERR ; ROYDEN JAMES WILLIAM LAKE  
**Agent(s):** PATENT ATTORNEY SERVICES  
**Designated states:** AT AU BE CH DE DK ES FR GB IT JP KR LI LU NL SE US  
**International class (IPC 8-9):** G06K19/06 (Advanced/Invention); G06K19/06 (Core/Invention)  
**International class (IPC 1-7):** A01K11/00 G06K19/06 G06K7/015  
**CPC:** G06K19/06131 G06K19/06037 G06K2019/06243 G06K2019/06253 G06K2019/06262  
**European class:** G06K19/06C3 G06K19/06C5Q S06K19/06W10 S06K19/06W6 S06K19/06W8  
**US class:** 235/462.03 235/494

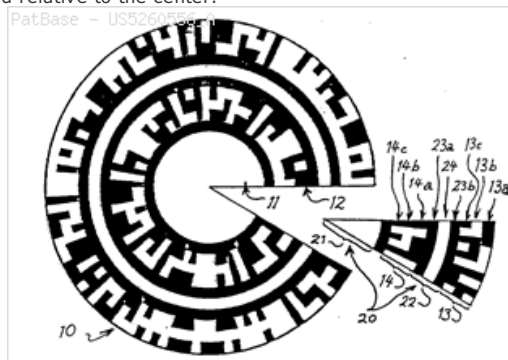
[Classification Explorer](#)

**Cited documents:** US4491923 A, US4449042 A, US4250405 A, US3985293 A, US3916160 A, US3808405 A, US3796863 A, US3636317 A, US3409760 A, GB1492136 A, GB1329454 A, DE1774959 A1, DE1774949 A1,

**Forward Citations:** WO9855956, WO9855956, WO9524018, WO9200576, WO18091944, WO15044794, WO10036514, WO07063195, WO07063195, WO07047552, WO05113086, WO0249340, WO0199047, US9930415, US9838740, US9811704, US9791865, US9747951, US9682320, US9682319, US9582699, US9573056, US9474968, US9393487, US9381424, US9268984, US9177387, US9002062, US8976265, US8961313, US8840470, US8797260, US8781151, US8758132, US8686939, US8582824, US8570378, US8547401, US8542907, US8527657, US8422777, US8416468, US8393964, US8368753, US8342963, US8323106, US8313380, US8310656, US8303411, US8287373, US8251820, US8188968, US8155312, US8142288, US8072470, US8035629, US8023020, US7972211, US7931208, US7883415, US7878415, US7874917, US7760248, US7726580, US7686692, US7663689, US7646372, US7639233, US7627139, US7623115, US7621459, US7530501, US7530496, US7398928, US7377438, US7278574, US7213756, US7191943, US7184151, US7184075, US7161581, US7137711, US7124947, US7124947, US7099070, US7034803, US7000840, US6991164, US6938826, US6390368, US6289125, US6118581, US6091842, US6087941, US5963368, US5930732, US5911767, US5845008, US5822074, US5808284, US5798514, US5690892, US5637854, US5500512, US5241166, US5202552, US2016232390, US2013259304, US2010329538, US2010302426, US2010224679, US2010173710, US2010092079, US2010033734, US2009200387, US2009090786, US2008048040, US2007278316, US2007210160, US2007187506, US2007158423, US2006291797, US2006055682, US2006022047, US2006007452, US2005272502, US2005263595, US2005102332, US2005024510, US2005011944, US2004188525, US2004125224, US2004027589, US2004027455, US2003121980, US2003121979, US2003087694, US10099147, US10099130, US10009664, SG148824, EP2344987, EP1583028, EP1301892, EP1301892, EP0986793, EP0689152, AU2009296901,

#### Abstract:

PCT No. PCT/AU89/00551 Sec. 371 Date Jun. 18, 1991 Sec. 102(e) Date Jun. 18, 1991 PCT Filed Dec. 20, 1989 PCT Pub. No. WO90/07162 PCT Pub. Date Jun. 28, 1990. A target for providing coded data readable by an imaging apparatus. Location marking means enable location of the target by the imaging apparatus preparatory to an imaging operation, the location marking means having high visibility characteristics e.g. being of retroreflective material to enable identification of the location marking means against a background. Code marking regions of annular shape include circumferentially disposed code markings containing coded data which are imaged by the imaging apparatus to enable recovery of the coded data from the target. The location marking means is located generally centrally of the code marking regions so that identification of the location marking means also locates the center of the code marking regions. The location marking means includes at least one concentric annular region to enable fine location of the center. The code marking regions are rotationally dispersed relative to the center.

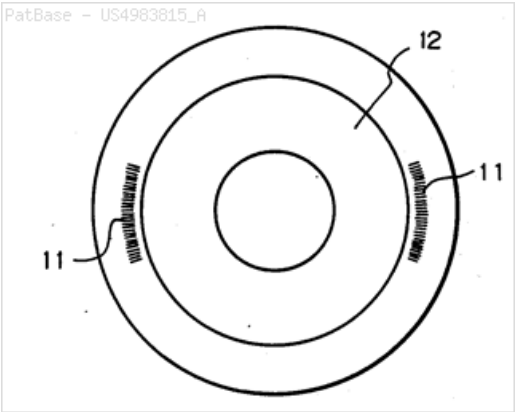


**Title:** Method of identifying stamper for optical information storage disk  
**Priority:** JP19890037744 19890217  
**Family:**

|  | Publication number | Publication date | Application number | Application date |
|--|--------------------|------------------|--------------------|------------------|
|  | JP2218033 A2       | 19900830         | JP19890037744      | 19890217         |
|  | JP2523853 B2       | 19960814         | JP19890037744      | 19890217         |
|  | US4983815 A        | 19910108         | US19890381459      | 19890718         |

**Probable Assignee:** PIONEER ELECTRONIC CORP  
**Assignee(s):(std):** PIONEER ELECTRONIC CORP ; PIONEER VIDEO CORP  
**Assignee(s):** PAIONIA BIDEO KK ; PAIONIA KK ; PIONEER ELECTRON CORP  
**Inventor(s):(std):** KUMASAKA OSAMU  
**International class (IPC 8-9):** B29D17/00 G11B7/26 (Advanced/Invention); B29D17/00 G11B7/26 (Core/Invention)  
**International class (IPC 1-7):** B29D17/00 G06F15/46 G11B7/26  
**CPC:** G11B7/26  
**European class:** G11B7/26  
**US class:** 235/376 235/462 235/462.03 235/487 G9B/7.194  
[Classification Explorer](#)  
**Cited documents:** US4825093 A, US4677604 A, US4166574 A,  
**Forward Citations:** WO10134015, USRE41041, US9811704, US9582699, US9268984, US7016294, US6698657, US6484942, US6009057, US6002657, US5907144, US5489768, US5445271, US5430281, US2016232390, US2013132672, US2012091195, US2003179688, EP0833335, EP0833334,

**Abstract:**  
There is disclosed a method of identifying a stamper for an optical information storage disk in order to distinguish first and second stampers from each other, the second stamper being replicated from the first stamper, each of the first and second stampers carrying recorded information signals and a printed code pattern recorded circumferentially and representing stamper identifying information from each other. The printed code pattern is read in a predetermined direction, and it is determined whether a start or stop signal of the printed code pattern is read first. The first and the second stampers are distinguished from each other in dependence on whether the start or stop signal is read first.



**Title:** TOKENS HAVING MINTED IDENTIFICATION CODES

**Priority:** US19900501239 19900329 WO1991US02105 19910327

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199176825 A1     | 19911021         | AU19910076825      | 19910327         |
| EP0523149 A1       | 19930120         | EP19910907615      | 19910327         |
| EP0523149 A4       | 19930728         | EP19910907615      | 19910327         |
| JP5506117 T2       | 19930902         | JP19910507396T     | 19910327         |
| US5216234 A        | 19930601         | US19900501239      | 19900329         |
| WO9114998 A1       | 19911003         | WO1991US02105      | 19910327         |

**Probable Assignee:** KILMARTIN IND INC

**Assignee(s):(std):** JANI SUPPLIES ENTERPRISES INC

**Assignee(s):** JANI SUPPLIES ENTERPRISES INC A CORP OF PA ; KILMARTIN IND ; KILMARTIN IND INC ; OLDE PHILADELPHIA MINT INC

**Inventor(s):(std):** BELL EDWARD H

**Inventor(s):** EDWARD H BELL

**Agent(s):** WRAYS; WRAYS PTY LTD

**Designated states:** AT AU BB BE BF BG BJ BR CA CF CG CH CM DE DK ES FI FR GA GB GR HU IT JP KP KR LI LK LU MC MG ML MR MW NL NO RO SD SE SN SU TD TG

**International class (IPC 8-9):** G06K19/06 G06K19/10 G06K7/14 G07D5/02 G07F1/06 (Advanced/Invention); G06K19/10 (Advanced/Non-invention); G06K19/06 G06K19/10 G06K7/14 G07D5/00 G07F1/00 (Core/Invention)

**International class (IPC 1-7):** G06K19/06 G06K19/10 G06K7/10 G06K7/14 G07B15/00 G07D5/02 G07F1/06

**CPC:** Y10S194/901 G06K7/14 G06K19/06009 G06K2019/06243 G06K2019/06253 G06K2019/06271 G07F1/06 G07F17/32 G07F17/3251

**European class:** G06K19/06C G06K7/14 G07F1/06 G07F17/32 G07F17/32K6 S06K19/06W12 S06K19/06W6 S06K19/06W8

**US class:** 194/214 194/901 235/454 235/494

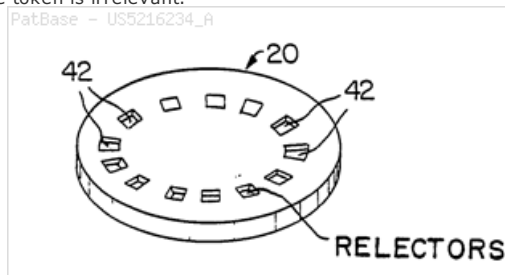
[Classification Explorer](#)

**Cited documents:** US4814589 A, US4625101 A, US4493989 A, US4449042 A, US4371071 A, US4292511 A, US4089400 A, US4004131 A, US3991883 A, US3926291 A, US3741363 A, US3643068 A, US3599771 A, US3418456 A, US3171020 A, US2983354 A, US2410845 A, GB2134296 A1, DE2659639 A1, DE2306187 A1,

**Forward Citations:** WO9322746, WO12145842, WO05011428, US9922486, US9811704, US9786123, US9734667, US9613487, US9613482, US9582699, US9563898, US9558544, US9514594, US9443377, US9424713, US9268984, US9196121, US9105152, US9098975, US9092944, US8920236, US8870647, US8821268, US8803894, US8734245, US8696444, US8613655, US8606002, US8597115, US8597107, US8562424, US8550464, US8382584, US8382582, US8366542, US8308562, US8297513, US8285034, US8272945, US8251808, US8192277, US8167705, US8100753, US8092293, US8074987, US8052519, US8038153, US8029357, US8016663, US7967682, US7931204, US7918455, US7883408, US7878896, US7866563, US7771272, US7719424, US7686681, US7549920, US7523937, US7404765, US7390256, US7382229, US7316615, US7267614, US7074478, US7011309, US6899619, US6802454, US6685564, US6581747, US6564507, US6550677, US6488210, US6464584, US6264109, US6254002, US6200218, US6191687, US6186895, US6148987, US6029891, US6021882, US5908103, US5907144, US5898241, US5895321, US5471923, US2016232390, US2014355864, US2012080842, US2011052049, US2010285869, US2009275407, US2009146373, US2008180250, US2007293309, US2007278314, US2007167134, US2007105616, US2007021171, US2006235546, US2006217186, US2006205519, US2006199649, US2006128462, US2006121984, US2006019739, US2005258597, US2005059479, US2004248635, US2004229682, US2004219975, US2004142743, US2004005920, US2003220136, US2003013509, JP2013542408, JP2007004421, GB2375217, GB2375217, GB2375216, GB2375216, GB2375215, GB2375215, GB2363883, GB2363883, GB2335297, GB2335297, EP2702570, EP2702570, DE10002644, AU2004261176,

**Abstract:**

A token for use, for example, in the gaming, vending, toll collection and amusement industries, has identifying indicia for automated discrimination of a token identification such as the issuing entity, denomination or the like. The token has a body, substantially shaped as a flat disk having opposite surfaces, with code marks impressed or minted directly into the token face surfaces on one or both opposite sides. The identification marks include surface variations aligned at least partly at an angle relative to a plane of the token surface, the marks being detectable as reflective or non-reflective variations, for example by an optical detector or by an optical emitter-detector pair. The identification marks can be annular rings or transverse variations elongated in a direction extending from a center to an edge of the token, which token preferably is round. The code of a particular token is determined by at least one of presence of an identification mark or pattern at a defined location, spacing of identification marks, and correspondence or non-correspondence of marks on opposite sides or in different areas of the token. The code is detectable as the token moves past a detector and spin of the token is irrelevant.

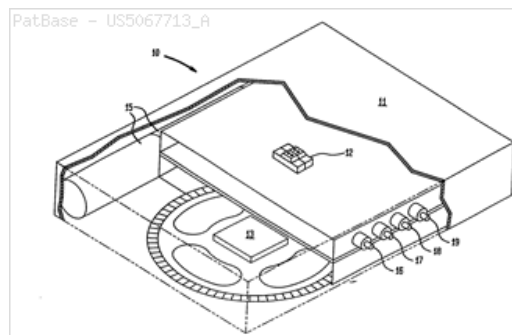


| Title:                                  | CODED PLAYING CARDS AND APPARATUS FOR DEALING A SET OF CARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
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| Priority:                               | US19900501148 19900329                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | WO1991US02134 19910327 | US19910796765 19911125 |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
|                                         | WO1992US09704 19921118                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | US19920983973 19921201 | US19930149325 19931109 |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
|                                         | US19950477191 19950607                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
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| Publication number                      | Publication date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Application number     | Application date       |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| BRPI9105931 A                           | 19921124                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BR1991PI05931          | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| CA2124201 AA                            | 19940524                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CA19922124201          | 19921118               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| EP0522077 A1                            | 19930113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EP19910907963          | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| EP0522077 A4                            | 19940720                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EP19910907963          | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| EP0625064 A1                            | 19941123                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EP19920924401          | 19921118               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| EP0625064 A4                            | 19950419                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EP19920924401          | 19921118               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| HU63067 A2                              | 19930728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | HU19910001678Q         | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| HU63067 A2                              | 19930728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | HU19920001678          | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| JP2002514931 T2                         | 20020521                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | JP19930510125T         | 19921118               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| JP5505748 T2                            | 19930826                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | JP19910507845T         | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| OA9617 A                                | 19930430                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | OA19920060283          | 19920929               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| US5067713 A                             | 19911126                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US19900501148          | 19900329               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| US5169155 A                             | 19921208                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US19910796765          | 19911125               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| US5259907 A                             | 19931109                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US19920983973          | 19921201               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| US5522623 A                             | 19960604                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US19950477191          | 19950607               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| WO9115278 A1                            | 19911017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WO1991US02134          | 19910327               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| WO9310870 A1                            | 19930610                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WO1992US09704          | 19921118               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| WO9513196 A1                            | 19950518                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WO1994US12708          | 19941103               |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Probable Assignee:                      | TECHNICAL SYSTEMS CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Assignee(s):(std):                      | TECH SYSTEMS CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Assignee(s):                            | TECHNICAL SYSTEMS CORP ; TECHNICAL SYSTEMS CORP A OH CORP ; TECHNICAL SYSTEMS CORP US ; CARPENTER BRYAN D ; SOULES JACK A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Inventor(s):(std):                      | CARPENTER BRYAN A ; CARPENTER BRYAN D ; SOULES JACK A ; SOULES JACK ARBUTHNOTT ; SOULENS JACK ARBUTHNOTT ; CARPENTER BRYAN DOUGLAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Inventor(s):                            | BRYAN DOUGLAS CARPENTER ; CARPENTER BRYAN DOUGLAS US ; SOULENS JACK ARBUTHNOTT US ; JACK ARBUTHNOTT SOULES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Agent(s):                               | MACRAE AND CO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Designated states:                      | AT BE BF BJ BR CA CF CG CH CI CM DE DK ES FR GA GB GN GR HU IE IT JP LI LU MC ML MR NL PL PT RU SE SN SU TD TG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| International class (IPC 8-9):          | A63F1/02 A63F1/14 A63F1/18 B42D15/10 G06K19/00 (Advanced/Invention);<br>A63F9/06 A63F9/24 (Advanced/Non-invention);<br>A63F1/00 B42D15/10 (Core/Invention);<br>A63F9/06 A63F9/24 (Core/Non-invention)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| International class (IPC 1-7):          | A63F1/02 A63F1/14 A63F1/18 B32B31/00 B41M31/00 B42D15/00 B42D15/10 G06K19/00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| CPC:                                    | Y10S283/901 A63F1/02 A63F2009/0609 A63F2009/2419 B42D25/23 B42D25/00 B42D25/382 A63F1/14 A63F2009/242 B42D25/387 B42D25/45 B42D2035/34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| European class:                         | A63F1/02 A63F1/14 B42D15/10 K63F9/06C4 K63F9/24N2B K63F9/24N2B1 L42D35/34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| US class:                               | 156/277 156/310 273/149.00P 273/149P 273/293 273/295 273/304 283/74 283/79 283/88 283/89 283/901 283/91 283/94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| <a href="#">Classification Explorer</a> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Cited documents:                        | WO9115278 A1, US5259907 A, US5176405 A, US5169155 A, US4889367 A, US4746789 A, US4663518 A, US4662637 A, US4591707 A, US4534562 A, US4222662 A, US3658342 A, US3640009 A, FR2540737 A1, FR1510531 A, EP0310516 A1, DE3807127 A1,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |
| Forward Citations:                      | WO9943403, WO9823081, WO9513196, WO15164305, WO14057147, WO09068836, WO09062513, WO09015212, WO09015212, WO09014443, WO07138238, WO07003888, WO06004926, WO05109325, WO05067384, WO05067384, WO05055129, WO04112923, WO04097729, WO04074000, WO04002589, WO03088144, WO03088144, WO03056500, WO03049007, WO0236218, WO0211834, WO02078965, WO0192033, WO0108900, USRE46826, USRE46505, USD764599, USD705364, USD692068, USD692067, USD692066, USD688241, USD687829, USD687435, USD686208, USD680537, US9993719, US9978220, US9959713, US9922502, US9914044, US9908034, US9901810, US9861881, US9861880, US9855491, US9849368, US9830778, US9818249, US9814964, US9802114, US9789385, US9764221, US9744436, US9731190, US9717979, US9713761, US9700785, US9684860, US9679603, US9672419, US9662562, US9659461, US9649550, US9649549, US9633523, US9630087, US9623317, US9616324, US9613487, US9607475, US9584681, US9581740, US9569924, US9566501, US9563898, US9561426, US9560221, US9544451, US9539494, US9533527, US9524618, US9511274, US9504905, US9489949, US9474957, US9457262, US9454722, US9452346, US9443377, US9432529, US9421451, US9387390, US9378766, US9370710, US9361444, US9345952, US9345951, US9339723, US9338312, US9333415, US9320964, US9317763, US9316597, US9275517, US9266012, US9266011, US9259640, US9254435, US9237244, US9233298, US9230201, US9220972, US9220971, US9219832, US9219708, US9197767, US9191530, US9191529, US9185247, US9185246, US9179020, US9168761, US9167109, US9162138, US9159185, US9154648, US9154647, US9148530, US9144732, US9143636, US9143635, US9137398, US9137397, US9131083, US9129271, US9126104, US9126103, US9124737, US9124736, US9124735, US9113010, US9113009, US9113008, US9113007, US9108430, US9106775, US9105152, US9101823, US9101821, US9101820, US9100516, US9098125, US9092944, US9088675, US9083830, US9083829, US9082322, US9060128, US9060081, US9055221, US9049318, US9044965, US9036162, US9013717, US9001389, US8998692, US8998211, US8992105, US8980504, US8979646, US8953178, US8953061, US8953060, US8947679, US8947592, US8944904, US8937727, US8936196, US8935367, US8934053, US8934027, US8931779, US8928897, US8922791, US8922670, US8920236, US8919777, US8913182, US8913151, US8913137, US8908075, US8908069, US8908051, US8902357, US8902340, US8902333, US8902324, US8899588, US8899587, US8896724, US8896720, US8891008, US8890970, US8890969, US8885180, US8885179, US8878953, US8872952, US8866926, US8866923, US8865293, US8854538, US8854494, US8854493, US8854492, US8851479, US8844930, US8843057, US8836809, US8833663, US8823823, US8821268, US8820745, US8814164, US8810723, US8801516, US8794522, US8789939, US8789758, US8777710, US8734245, US8720891, US8702101, US8702100, US8701857, US8684416, US8668544, US8662500, US8659787, US8657287, US8651486, US8651485, US8646779, US8636224, US8628086, US8613655, US8597114, US8597107, US8591305, US8590896, US8579289, US8567786, US8567784, |                        |                        |  |  |                    |                  |                    |                  |               |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |            |          |                |          |            |          |               |          |                 |          |                |          |              |          |                |          |          |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |             |          |               |          |              |          |               |          |              |          |               |          |              |          |               |          |

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# **Abstract:**

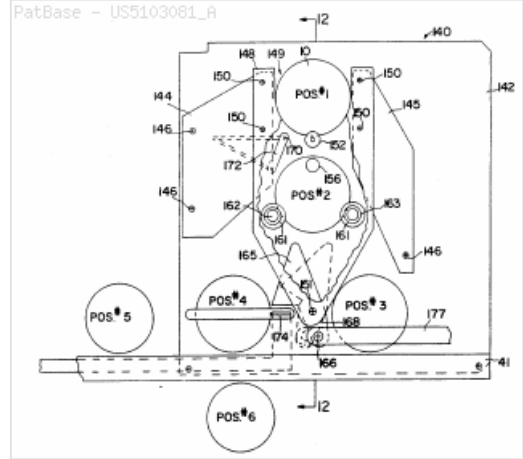
A deck of cards is coded by marking each card on its face with a bar code which is essentially invisible to the human eye, but can be read by a detector matched to the source of wavelength of the light used to irradiate each card as it is passed over the surface of a portable housing which houses the detector and the associated reading means. Appropriate hardware is also housed in the housing to process the coded information read. The software provided stores a number of predetermined "hands" which are to be dealt. It can also deal a random deal, more random than can be dealt by human shuffling of the deck. A method is provided to deal a preselected "deal" to a chosen number of players, typically four, the apparatus indicating to the human dealer to which location each card is to be dealt.



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**Abstract:**

A gaming chip that has a circular bar code imprinted thereon so as to convey information about the issuer of the chip, the chip's denomination, and a serial number which can be utilized to verify the authenticity of the chip. A chip validating device rotates the chip while being maintained in a stationary linear position, such that the encoded information is repeatedly passed before a stationary bar code reader. The validator then uses this information to determine the authenticity of the chip, to indicate the denomination of the chip being wagered, and to accept or reject the chip.



**Title:** Intimate source and detector and apparatus employing same

**Priority:** US19920822484 19920117 WO1993US00283 19930113 US19940202669 19940225

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE69319185 D1      | 19980723         | DE19936019185      | 19930113         |
| EP0576662 A1       | 19940105         | EP19930903449      | 19930113         |
| EP0576662 B1       | 19980617         | EP19930903449      | 19930113         |
| JP6506788 T2       | 19940728         | JP19930512637T     | 19930113         |
| US5430286 A        | 19950704         | US19940202669      | 19940225         |
| WO9314471 A1       | 19930722         | WO1993US00283      | 19930113         |

**Probable Assignee:** HAND HELD PRODUCTS INC

**Assignee(s):(std):** WELCH ALLYN INC

**Assignee(s):** WELCH ALLYN INC SKANEATELES FALLS N Y US ; HAND HELD PRODUCTS INC ; WELCH ALLYN DATA COLLECTION INC

**Inventor(s):(std):** HAMMOND CHARLES ; HAMMOND CHARLES M JR ; HAMMOND JR CHARLES M ; HAVENS WILLIAM ; HAVENS WILLIAM H ; LONGACRE ANDREW ; LONGACRE ANDREW JR ; LONGACRE JR ANDREW

**Inventor(s):** LONGACRE ANDREW JR SKANEATELES NY 13152 US ; HAVENS WILLIAM H SKANEATELES NY 13152 US ; HAMMOND CHARLES M JR SKANEATELES NY 13152 US ; HAMMOND CHARLES M

**Designated states:** AT BE CH DE DK ES FR GB GR IE IT JP LU MC NL PT SE

**International class (IPC 8-9):** G06K7/10 G06T1/00 (Advanced/Invention); G06K7/10 G06T1/00 (Core/Invention)

**International class (IPC 1-7):** G06F15/64 G06K7/10

**CPC:** G06K7/10594 G06K7/10702

**European class:** G06K7/10S2P G06K7/10S2P4D

**US class:** 235/462 235/462.22 235/472 235/472.01

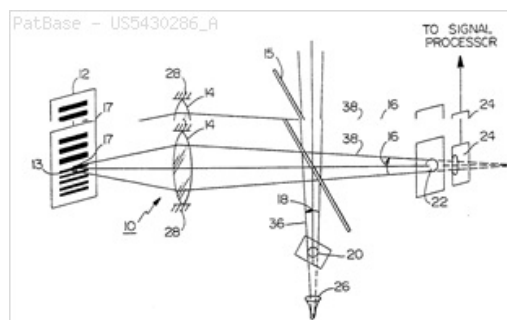
[Classification Explorer](#)

**Cited documents:** US4866258 A, US4816659 A, US4675531 A, US4603976 A, US4346292 A, US4281908 A, US4201910 A, US4143809 A, US3991275 A, US3744026 A, FR2479511 A1, EP0524349 A1, EP0061000 A1,

**Forward Citations:** WO9848370, WO13072297, US9990520, US9852321, US9785811, US9659203, US9582696, US9384378, US9373016, US9355288, US9323969, US9224023, US9148551, US9104930, US9092686, US9088683, US9076054, US9047525, US8844822, US8702000, US8628015, US8608071, US8602309, US8596542, US8587697, US8587595, US8561903, US8559767, US8479992, US8474722, US8439264, US8397992, US8366005, US8342411, US8196838, US8196837, US8172141, US8146817, US8121440, US8074887, US8042740, US7954719, US7950583, US7905413, US7878407, US7878403, US7874485, US7861936, US7854384, US7852519, US7845563, US7832643, US7819326, US7817878, US7815121, US7815113, US7806336, US7806335, US7793841, US7789309, US7784695, US7775436, US7770798, US7770796, US7762465, US7735737, US7731091, US7719580, US7712666, US7708205, US7681799, US7673803, US7673802, US7665665, US7661597, US7661595, US7658330, US7654461, US7651028, US7644866, US7637433, US7637432, US7624926, US7621455, US7614560, US7611064, US7611062, US7607581, US7604175, US7600689, US7594609, US7594608, US7588190, US7588188, US7584893, US7584892, US7581681, US7581680, US7578445, US7578442, US7575170, US7575169, US7575167, US7571859, US7571858, US7568626, US7568625, US7559475, US7559474, US7556199, US7548274, US7546954, US7546952, US7546951, US7543752, US7543749, US7540425, US7540424, US7540422, US7537165, US7533824, US7533823, US7533821, US7533820, US7530497, US7527206, US7527204, US7527202, US7527200, US7523863, US7520433, US7516898, US7513430, US7513428, US7510122, US7503499, US7503498, US7494063, US7492493, US7490778, US7490774, US7487917, US7484666, US7469835, US7464877, US7434733, US7428079, US7407109, US7398930, US7398929, US7389929, US7387253, US7383998, US7357325, US7347374, US7331523, US7304670, US7275694, US7270274, US7270273, US7268924, US7219843, US7147159, US7124948, US7104456, US7090132, US7080786, US7055747, US7017812, US6435411, US6366707, US6065678, US5560291, US2014328983, US2010289919, US2009255993, US2008143855, US2008116279, US2006098433, US2004035933, US2004020990, US2003226895, US2002125317, EP3089072, EP2793163,

**Abstract:**

There is provided a system of detecting mark-sense indicia wherein the images of a light source and the region of sensitivity of a light sensor are substantially coaxial, coplanar, and coextensive throughout the working depth of field. This system is insensitive to the laminate and the diffusion effects. A light source is aimed at a beam splitter that diverts a portion of the light beam through optics that focus the light on a reflective target containing a bar code symbol to be scanned. The reflected beam is returned through the optics and the beam splitter, and a portion of the reflected beam is conducted to a light sensor. In this manner, the light path from the detector to the optical sensor is split twice by the beam splitter. The optics are configured so that the light beams that define the field of illumination and the region of sensitivity and which pass between the optics and the target are congruent, having identical optical axes and angles of divergence.



**Title:** Recording medium, information reproducing apparatus and information reproducing method

**Priority:**

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|---------------|----------|---------------|----------|---------------|----------|
| JP19920258262 | 19920928 | JP19970255774 | 19930927 | JP19970255775 | 19930927 |
| JP19930260464 | 19930927 | JP19990066360 | 19930927 | JP20050120254 | 19930927 |
| JP20010162699 | 19930927 | JP20070077788 | 19930927 | JP20060184700 | 19930927 |
| JP20050120369 | 19930927 | JP20060001508 | 19930927 | EP19930921074 | 19930928 |
| EP20000100744 | 19930928 | WO1993JP01377 | 19930928 | US19950407018 | 19950601 |
| JP19970255774 | 19970919 | JP19970255775 | 19970919 | JP19970255823 | 19970919 |
| JP19970255824 | 19970919 | JP19970255827 | 19970919 | JP19970255825 | 19970919 |
| JP19970255828 | 19970919 | JP19970255826 | 19970919 | US19980137291 | 19980820 |
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| JP20050120384 | 20090119 |               |          |               |          |

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT195030 E         | 20000815         | AT19930921074T     | 19930928         |
| AT235720 E         | 20030415         | AT19930100744T     | 19930928         |
| AU199348337 A1     | 19940426         | AU19930048337      | 19930928         |
| AU668987 B2        | 19960523         | AU19930048337      | 19930928         |
| DE69329120 D1      | 20000831         | DE19936029120      | 19930928         |
| DE69329120 T2      | 20010322         | DE19936029120T     | 19930928         |
| DE69332814 D1      | 20030430         | DE19936032814      | 19930928         |
| DE69332814 T2      | 20031218         | DE19936032814T     | 19930928         |
| DK0670555 T3       | 20000918         | DK19930921074T     | 19930928         |
| EP0670555 A1       | 19950906         | EP19930921074      | 19930928         |
| EP0670555 A4       | 19970924         | EP19930921074      | 19930928         |
| EP0670555 B1       | 20000726         | EP19930921074      | 19930928         |
| EP0996083 A2       | 20000426         | EP20000100744      | 19930928         |
| EP0996083 A3       | 20001220         | EP20000100744      | 19930928         |
| EP0996083 B1       | 20030326         | EP20000100744      | 19930928         |
| EP1298579 A1       | 20030402         | EP20020026881      | 19930928         |
| JP10187873 A2      | 19980721         | JP19970255828      | 19970919         |
| JP10187907 A2      | 19980721         | JP19970255823      | 19970919         |
| JP10187908 A2      | 19980721         | JP19970255825      | 19970919         |
| JP10187909 A2      | 19980721         | JP19970255826      | 19970919         |
| JP10187910 A2      | 19980721         | JP19970255827      | 19970919         |
| JP10261059 A2      | 19980929         | JP19970255824      | 19970919         |
| JP10261059 A2      | 19980929         | JP19970255824      | 19970919         |
| JP11007511 A2      | 19990112         | JP19970255774      | 19970919         |
| JP11007512 A2      | 19990112         | JP19970255775      | 19970919         |
| JP11316808 A2      | 19991116         | JP19990066360      | 19990312         |
| JP11328303 A2      | 19991130         | JP19990077380      | 19990323         |
| JP2001125586 A2    | 20010511         | JP20000286942      | 20000921         |
| JP2001143028 A2    | 20010525         | JP20000286944      | 20000921         |
| JP2001160120 A2    | 20010612         | JP20000286943      | 20000921         |
| JP2001175822 A2    | 20010629         | JP20000286946      | 20000921         |
| JP2001184450 A2    | 20010706         | JP20000286945      | 20000921         |
| JP2001184469 A2    | 20010706         | JP20000286947      | 20000921         |
| JP2002099882 A2    | 20020405         | JP20010162699      | 20010530         |
| JP2004310796 A2    | 20041104         | JP20040217696      | 20040726         |
| JP2004326824 A2    | 20041118         | JP20040217697      | 20040726         |
| JP2004334908 A2    | 20041125         | JP20040217698      | 20040726         |
| JP2004362603 A2    | 20041224         | JP20040217699      | 20040726         |
| JP2005228357 A2    | 20050825         | JP20050120354      | 20050418         |
| JP2005243047 A2    | 20050908         | JP20050120089      | 20050418         |
| JP2005276229 A2    | 20051006         | JP20050119961      | 20050418         |
| JP2005302046 A2    | 20051027         | JP20050119963      | 20050418         |
| JP2005310145 A2    | 20051104         | JP20050120088      | 20050418         |
| JP2005310147 A2    | 20051104         | JP20050120174      | 20050418         |
| JP2005310148 A2    | 20051104         | JP20050120175      | 20050418         |
| JP2005310149 A2    | 20051104         | JP20050120254      | 20050418         |
| JP2005310150 A2    | 20051104         | JP20050120255      | 20050418         |
| JP2005310151 A2    | 20051104         | JP20050120326      | 20050418         |
| JP2005312044 A2    | 20051104         | JP20050120369      | 20050418         |
| JP2005317960 A2    | 20051110         | JP20050119962      | 20050418         |
| JP2005322225 A2    | 20051117         | JP20050120368      | 20050418         |
| JP2005327266 A2    | 20051124         | JP20050120325      | 20050418         |
| JP2005327267 A2    | 20051124         | JP20050120372      | 20050418         |
| JP2005332374 A2    | 20051202         | JP20050120353      | 20050418         |
| JP2005341546 A2    | 20051208         | JP20050120371      | 20050418         |
| JP2005353040 A2    | 20051222         | JP20050120384      | 20050418         |

|                 |          |               |          |
|-----------------|----------|---------------|----------|
| JP2006107535 A2 | 20060420 | JP20060001508 | 20060106 |
| JP2006260609 A2 | 20060928 | JP20060184700 | 20060704 |
| JP2007172664 A2 | 20070705 | JP20070077788 | 20070323 |
| JP2008084344 A2 | 20080410 | JP20070325040 | 20071217 |
| JP2008160855 A2 | 20080710 | JP20070338347 | 20071227 |
| JP2008181555 A2 | 20080807 | JP20080072359 | 20080319 |
| JP2009064477 A2 | 20090326 | JP20080330939 | 20081225 |
| JP2009080854 A2 | 20090416 | JP20090008748 | 20090119 |
| JP2833975 B2    | 19981209 | JP19930260464 | 19930927 |
| JP3181866 B2    | 20010703 | JP19970255775 | 19970919 |
| JP3390160 B2    | 20030324 | JP20000286945 | 20000921 |
| JP3393045 B2    | 20030407 | JP19970255774 | 19970919 |
| JP3433168 B2    | 20030804 | JP20000286946 | 20000921 |
| JP3455079 B2    | 20031006 | JP19970255824 | 19970919 |
| JP3455079 B2    | 20031006 | JP19970255824 | 19930927 |
| JP3455080 B2    | 20031006 | JP19970255827 | 19970919 |
| JP3564051 B2    | 20040908 | JP20000286942 | 20000921 |
| JP3568374 B2    | 20040922 | JP19970255825 | 19970919 |
| JP3639589 B2    | 20050420 | JP20040217696 | 20040726 |
| JP3639590 B2    | 20050420 | JP20040217698 | 20040726 |
| JP3639591 B2    | 20050420 | JP20040217699 | 20040726 |
| JP3720730 B2    | 20051130 | JP20010162699 | 20010530 |
| JP3834051 B2    | 20061018 | JP20050120369 | 20050418 |
| JP3841821 B2    | 20061108 | JP20060001508 | 20060106 |
| JP3845437 B2    | 20061115 | JP20050119963 | 20050418 |
| JP3845438 B2    | 20061115 | JP20050120174 | 20050418 |
| JP3845439 B2    | 20061115 | JP20050120368 | 20050418 |
| JP3847769 B2    | 20061122 | JP20050120089 | 20050418 |
| JP3887643 B2    | 20070228 | JP20050120088 | 20050418 |
| JP3893398 B2    | 20070314 | JP20050120325 | 20050418 |
| JP3908250 B2    | 20070425 | JP20050120175 | 20050418 |
| JP3923066 B2    | 20070530 | JP20050120372 | 20050418 |
| JP3965192 B2    | 20070829 | JP20050120326 | 20050418 |
| JP3984266 B2    | 20071003 | JP20050120371 | 20050418 |
| JP4024819 B2    | 20071219 | JP20060184700 | 20060704 |
| JP4116013 B2    | 20080709 | JP20050120255 | 19930927 |
| JP4116013 B2    | 20080709 | JP20050120255 | 20050418 |
| JP4199291 B2    | 20081217 | JP20070325040 | 20071217 |
| JP4323551 B2    | 20090902 | JP20080072359 | 20080319 |
| JP4398506 B2    | 20100113 | JP20080330939 | 20081225 |
| JP6231466 A2    | 19940819 | JP19930260464 | 19930927 |
| KR100225112 B1  | 19991015 | KR19950701203 | 19950328 |
| KR19950703768 A | 19950920 | KR19950701203 | 19930928 |
| US2002199149 AA | 20021226 | US20020170728 | 20020613 |
| US5896403 A     | 19990420 | US19950407018 | 19950601 |
| US6052813 A     | 20000418 | US19980137289 | 19980820 |
| US6058498 A     | 20000502 | US19980137291 | 19980820 |
| US6460155 BA    | 20021001 | US20000488244 | 20000120 |
| US6622276 BB    | 20030916 | US20020170728 | 20020613 |
| WO9408314 A1    | 19940414 | WO1993JP01377 | 19930928 |

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**Agent(s):** GRIFFITH HACK

**Designated states:** AT AU BE CH CY DE DK ES FI FR GB GR IE IT KR LI LU MC NL PT SE US

**International class (IPC 8-9):** B41J21/00 B41J29/40 B41J3/01 B41J5/30 B42D1/00 G06F17/30 G06F3/12 G06K1/12 G06K17/00 G06K19/00 G06K19/06 G06K7/00 G06K7/015 G06K7/10 G06K7/12 G06T3/00 G09B5/06 G10K15/02 G10L13/00 G10L13/02 G11B20/12 G11B23/40 G11B7/00 G11B7/0033 G11B7/004 G11B7/007 G11B7/013 G11B7/24 H01L21/02 H04N1/00 H04N1/21 H04N1/32 H04N1/387 H04N1/41 H04N5/76 H04N5/91 H04N5/92 (Advanced/Invention); B42D1/00 G06K1/12 G06K19/06 H04L1/00 (Advanced/Non-invention); B41J21/00 B41J29/40 B41J3/00 B41J5/30 B42D1/00 G06F17/30 G06F3/12 G06K1/00 G06K17/00 G06K19/00 G06K19/06 G06K7/00 G06K7/01 G06K7/10 G06K7/12 G06T3/00 G10K15/02 G10L13/00 G11B20/12 G11B23/38 G11B7/00 G11B7/007 G11B7/24 H01L21/02 H04N1/00 H04N1/387 H04N1/41 H04N5/76 H04N5/91 H04N5/92 (Core/Invention); B42D1/00 G06K19/06 H04L1/00 (Core/Non-invention)

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**US class:**

369/112 369/14 369/275.1 369/275.3 371/37.1 707/E17.009 707/E17.009S 714/752 714/752P  
G9B/007.004 G9B/007.038 G9B/7.004 G9B/7.004S G9B/7.038 G9B/7.038S

[Classification Explorer](#)**Cited documents:**

US6037915 A, US6009393 A, US5905602 A, US5898166 A, US5860679 A, US5644557 A, US5623479 A,  
US5623478 A, US5475543 A, US5377814 A, US5161233 A, US5128528 A, US5101096 A, US5051736 A,  
US5028769 A, US5003167 A, US4926035 A, US4842396 A, US4816668 A, US4745269 A, US4570250 A,  
US4544259 A, US4461552 A, US4375058 A, US4340810 A, US4337375 A, US4263504 A, US4247907 A,  
US3970803 A, JP7254037, JP6506555, JP6502036, JP6476176, JP64076176, JP6376087, JP63282587,  
JP63266685, JP63166076, JP63076087, JP6231466, JP62238749, JP62179072, JP61271580, JP60129891,  
JP60015914, JP59228700, JP5819712, JP58019712 A2, JP58019712, JP57147374, JP57008880,  
JP561988, JP54057820, JP530562928, JP53056292 A2, JP5215969, JP5197122, JP5109068 A2,  
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JP3231730, JP3228193, JP3149683, JP3127341, JP3100972 U, JP3078894 A2, JP3011481, JP3006745 U,  
JP2297538, JP2279360, JP2268383 A2, JP2244293, JP2231823, JP2119471 A2, JP2117885, JP2105333  
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JP0256091, EP0439682 B1, EP0388204 A2, EP0388024 A1, EP0354581 B1, EP0203659 A1, AU667059  
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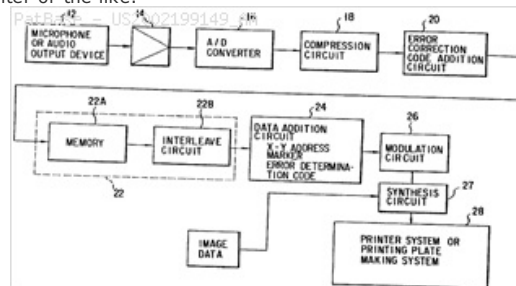
**Forward Citations:**

WO17051486, WO16163632, WO13168305, WO13113905, WO12003558, WO11087030, WO09107570,  
WO08010544, WO07125773, WO07010650, WO06070458, WO06065380, WO05076983, WO05076983,  
WO05064530, WO05064523, WO05059643, WO05055129, WO04090794, WO04057526, WO03083763,  
WO03046805, WO03046803, WO03027951, WO0244997, WO0235450, WO0235449, WO0235447,  
WO0234525, WO02062440, WO0133488, WO0122348, WO0116691, WO0038098, USRE46297,  
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# Abstract:

A long time optical recording and repeated reproduction of multimedia information is possible. Using a printer system or printing process system, on a recording medium such as a sheet, the so-called multimedia information in the form of dot codes (36) together with images (32) and characters (34) is recorded. The multimedia information includes audio information such as voices, image information obtainable from a camera and others, and digitally coded data obtainable from a personal computer and other. A pen-like information reproducing device (40) is manually moved to scan the dot codes (36) and to take in the dot codes. The original sound is generated by a voice output device (42) such as an earphone, the original image information is outputted on a display such as a CRT, and the digitally coded original data to a page printer or the like.



**Title:** EARTH-AND-SAND CARRYING-OUT SYSTEM FOR SHIELD METHOD

**Priority:** JP19930036813 19930225

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| JP2837602 B2       | 19981216         | JP19930036813      | 19930225         |
| JP6248878 A2       | 19940906         | JP19930036813      | 19930225         |

**Probable Assignee:** KUBOTA CONSTRUCTION CO

**Assignee(s):(std):** KUBOTA CONSTRUCTION CO

**Assignee(s):** KUBOTA KENSETSU KK

**Inventor(s):(std):** NUKUSHINA RIHEI

**International class** E21D9/12 E21D9/13 (Advanced/Invention);

(IPC 8-9): E21D9/12 (Core/Invention)

**International class** E21D9/12

(IPC 1-7):

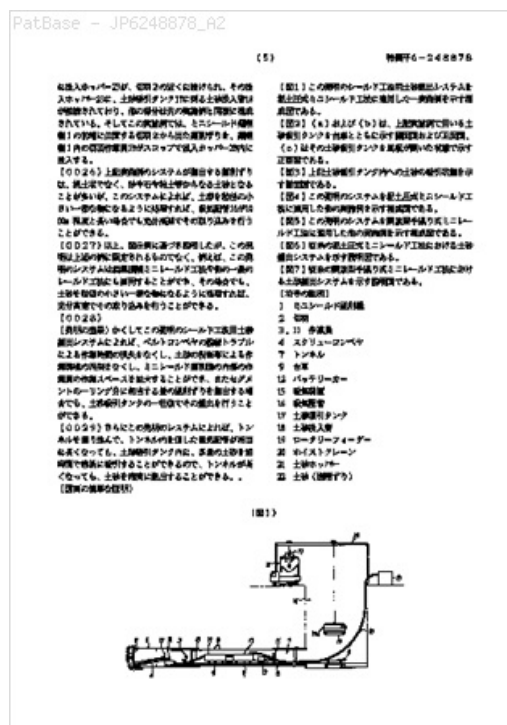
Classification Explorer

**Forward Citations:** US9868588, US9582699, US9268984, JP4226402, JP2004124697,

### Abstract:

**PURPOSE:** To surely carry-out excavated earth and sand over a long distance, by a method wherein an air-sucking pipe line, an earth and sand-sucking tank, an earth and sand-throwing in pipe passing an excavating machine for minishield tunneling work and a rotary feeder are, respectively in series, connected with an air-sucking apparatus provided on the ground.

CONSTITUTION: An air-sucking apparatus 15 with a large capacity is provided on the ground in the vicinity of a departure shaft 14, a minishield excavator and an air-sucking pipe line 16 is laid at the inside of a tunnel 7 which is excavated using and is lined with segments 6. After that, an earth and sand-sucking tank 17 is movably installed between positions on the ground and at the rear side of the minishield excavator 1, an earth and sand-throwing in pipe 18 having a short length is passed through the inside of the excavator 1, and a rotary feeder 19 is provided near a pit face 2, following which these are respectively connected in series. After that, a screw conveyor 4 is installed near the pit face 2, and a hoist crane 20 and a hopper 21 for earth and sand are installed on the ground in the vicinity of the departure shaft 14, following which the inside of the tank 17 is decompressed, and excavated waste 22 is thrown in an earth and sand-throwing in opening 19 and is loaded in the tank 17 by an air-flow conveyance and finally the tank 17 is carried out on the ground.



**Title:** Back-pressure filter, to prepare cream coffee.**Priority:** PT19940008987U 19940311

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AT175551 E         | 19990115         | AT19940670006T     | 19941019         |
|         | EP0682902 A1       | 19951122         | EP19940670006      | 19941019         |
|         | EP0682902 B1       | 19990113         | EP19940670006      | 19941019         |
|         | ES2129610 T3       | 19990616         | ES19940670006T     | 19941019         |
|         | PT8987 U           | 19950912         | PT19940008987U     | 19940311         |
|         | PT8987 Y           | 19970829         | PT19940008987U     | 19940311         |

**Probable Assignee:** BRIEL ELECTRODOMESTICOS SA**Assignee(s):(std):** BRIEL ELECTRODOMESTICOS ; BRIEL ELECTRODOMESTICOS SA**Assignee(s):** BRIEL INDUSTRIA DE ELECTRODOMESTICOS S A ; BRIEL INDUSTRIA DE ELECTRODOMESTICOS SA**Inventor(s):(std):** MARQUES RIBEIRO VALDEMAR ESTRA**Inventor(s):** MARQUES RIBEIRO VALDEMAR ; MARQUES RIBEIRO ; MARQUES RIBEIRO VALDEMAR ESTRADA EXTERIOR DA**Designated states:** AT BE CH DE ES FR GB IT LI NL**International class** A47J31/06 (Advanced/Invention)

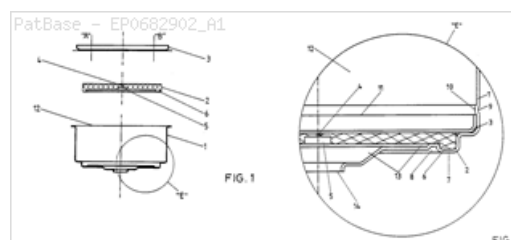
(IPC 8-9):

**International class** A47J31/06 A47J31/24

(IPC 1-7):

**CPC:** A47J31/0663 A47J31/4496**European class:** A47J31/06B A47J31/06P2 A47J31/44L[Classification Explorer](#)**Cited documents:** EP0459323 A2, EP0264352 A1, DE4129814 A1,**Forward Citations:** WO9726815, WO17158565, US6840158, US6012379, NL1013270, FR2833825, FR2771614, FR2744002, EP1323366, EP1092377, EP0919171, EP0880330, CN107000928, CN102933471, CN102933471,**Abstract:**

A back-pressure filter to prepare cream-coffee, to be applied in pressurized water coffee machines, conceived to produce cream coffee, with great independence from the grinding degree to which the coffee beans were formerly submitted. The filter as presented consists, basically, on a body (1) a rubber ring (2) and a bored disk (3). This, mounted inside the body (1) presses the ring (2) that thus is fixed by its periphery, and flexible at its central part, creating thus a back-pressure, which provokes the rising of foam and the pouring of cream coffee to the cups.



**Title:** FIREFIGHTER'S GARMENT

**Priority:** US19960011017P 19960201 US19970792294 19970131 CA19982228443 19980130

**Family:**

|  | Publication number | Publication date | Application number | Application date |
|--|--------------------|------------------|--------------------|------------------|
|  | CA2228443 AA       | 19980731         | CA19982228443      | 19980130         |
|  | CA2228443 C        | 20051018         | CA19982228443      | 19980130         |
|  | US5928971 A        | 19990727         | US19970792294      | 19970131         |

**Probable Assignee:** SOUTHERN MILLS INC

**Assignee(s):(std):** SOUTHERN MILLS INC

**Assignee(s):** STATHAM DENISE N ; ALEXANDER GREGORY ; ELLIS W DOUGLAS

**Inventor(s):(std):** ALEXANDER GREGORY ; ELLIS W DOUGLAS ; STATHAM DENISE N

**Agent(s):** FINLAYSON AND SINGLEHURST

**International class**  
**(IPC 8-9):** A41D31/00 A62B17/00 B32B5/26 D03D15/00 D03D15/12 (Advanced/Invention);  
A41D31/00 A62B17/00 B32B5/22 D03D15/00 D03D15/12 (Core/Invention)

**International class**  
**(IPC 1-7):** A62B17/00 B32B7/00 D03D15/12

**CPC:** A62B17/003 A41D31/0022 A41D31/0027 B32B5/26 D03D15/00 D03D15/0011 D03D15/12 D10B2101/06 D10B2201/02 D10B2201/24 D10B2211/02 D10B2321/02 D10B2321/041 D10B2321/042 D10B2321/06 D10B2331/021 D10B2331/04 D10B2331/061 D10B2331/14 D10B2501/04 Y10T442/2139 Y10T442/2484 Y10T442/322 Y10T442/3228 Y10T442/348 Y10T442/3512

**European class:** A41D31/00C4 A41D31/00C4L A62B17/00D B32B5/26 D03D15/00 D03D15/12 N10B331/021

**US class:** 442/118 442/208 442/209 442/240 442/244 442/76

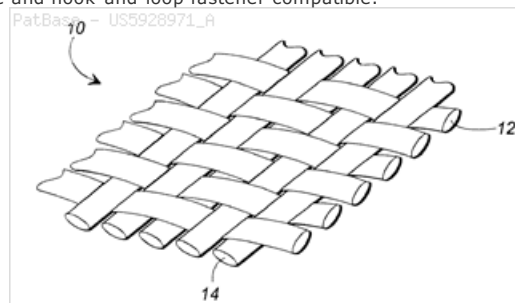
[Classification Explorer](#)

**Cited documents:** US5539928 A, US5362555 A, US5236769 A, US5150476 A, US5131097 A, US5031242 A, US5001783 A, US5001781 A, US4897886 A, US4843646 A, US4830897 A, US4748691 A, US4709421 A, US4604759 A, US4502153 A, US4451934 A, US4039709 A, US4034417 A, US3710395 A,

**Forward Citations:** WO13074133, WO11155968, WO07021459, WO07021459, WO07014056, WO07014056, WO05084757, WO04067822, WO04067822, WO04005163, WO0205671, US9938645, US9878185, US9732446, US9582699, US9416465, US9386816, US9364694, US9268984, US9259599, US9091020, US8940209, US8898821, US8840987, US8819866, US8793814, US8719969, US8652975, US8650668, US8614156, US8528120, US8475919, US8347420, US8327469, US8209785, US8071492, US8012891, US8012890, US7913322, US7854017, US7816289, US7741233, US7713891, US7682997, US7676855, US7666802, US7589036, US7393800, US6974785, US6794319, US6632754, US6624096, US6607562, US6430754, US6247179, US2016183615, US2015121612, US2014272361, US2013074250, US2012090080, US2012042442, US2011010827, US2010285285, US2010210162, US2010048853, US2009320176, US2009255038, US2009249531, US2009181588, US2008086798, US2008038973, US2008012170, US2008006970, US2008001128, US2007224422, US2007184737, US2007137012, US2007136923, US2007037020, US2007021023, US2006089069, US2005197452, US2005186875, US2004152378, US2004092187, US2004074808, US2004038605, US2004029477, US2004004079, US2003232560, US2003226794, US2003203690, FR2811520, EP3231906, EP2644759, EP2644759, EP1595014, EP1595014, EP1421229, CN106993837, CN105200615, CN104389083, CN103622186, CN103622186, CN102373543, CN102373539,

**Abstract:**

A face cloth for a thermal barrier of a firefighter's garment made from a fabric woven from fire resistant yarns. The yarns are woven into a twill pattern with, preferably, filament yarns in the filling direction and spun yarns in the warp direction and a finish is applied to the fabric. The finish is accepted by the fabric and renders the face cloth both wickable and hook-and-loop compatible. The face cloth has a smooth and slick surface and is wickable and hook-and-loop fastener compatible.





**Title:** PRINTING APPARATUS WITH CUTTER AND IMAGE PRINTING AND CUTTING METHOD  
**Priority:** JP19980001843 19980107 JP19980001844 19980107 US19990225491 19990106  
US20000730851 20001207

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | JP11198467 A2      | 19990727         | JP19980001843      | 19980107         |
|         | JP11198468 A2      | 19990727         | JP19980001844      | 19980107         |
|         | JP3837727 B2       | 20061025         | JP19980001844      | 19980107         |
|         | JP3925578 B2       | 20070606         | JP19980001843      | 19980107         |
|         | US2001000222 AA    | 20010412         | US20000730851      | 20001207         |
|         | US6209435 BA       | 20010403         | US19990225491      | 19990106         |
|         | US6619166 BB       | 20030916         | US20000730851      | 20001207         |

**Probable Assignee:** FUJIFILM HOLDINGS CORP

**Assignee(s):(std):** FUJI PHOTO FILM CO LTD

**Assignee(s):** FUJIFILM CORP ; FUJIFILM HOLDINGS CORP ; ICHIKA KOJI ; KOMORI NOBORU ; MIYAZAKI TAKAO ; FUJI PHOTO FILM CO

**Inventor(s):(std):** ICHIKA KOJI ; ICHIKAWA KOJI ; KOMORI NOBORU ; MIYAZAKI TAKAO ; MIYAZAKI NOBUO

**International class (IPC 8-9):** B26D11/00 B26D3/08 B26D5/00 B26D5/34 B26D9/00 B26F1/38 B41J11/66 (Advanced/Invention)

**International class (IPC 1-7):** B26D1/12 B26D5/00 B26D7/27 B41C3/00 B41J11/66

**CPC:** Y10T83/04 Y10T83/141 Y10T83/4696 Y10T83/538 Y10T83/849 Y10T83/853 Y10T83/9377 Y10T83/9387 B26D5/007 B26D3/085 B26D5/00 B26D5/08 B26D5/34 B26D9/00 B26F1/384 B41J11/66 B41J11/663 B41J11/666

**European class:** B26D11/00 B26D3/08B B26D5/00 B26D5/00C B26D5/34 B26D9/00 B26F1/38B B41J11/66 B41J11/66B B41J11/66P L26D5/08

**US class:** 400/621 400/621P 83/13 83/300 83/368 83/522.11 83/522.15 83/665 83/669 83/72

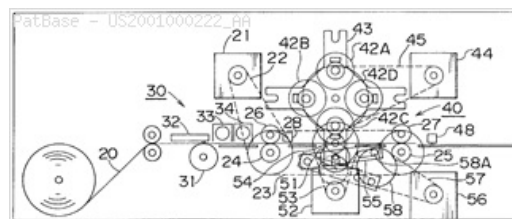
[Classification Explorer](#)

**Cited documents:** US6484901 BA, US6434579 BA, US6408132 BA, US6396963 BB, US6385628 BA, US6209435 BA, US6179161 BA, US6123362 A, US6116906 A, US6085195 A, US6047130 A, US5993048 A, US5942065 A, US5930810 A, US5791215 A, US5789050 A, US5761982 A, US5487010 A, US5405475 A, US5362374 A, US5349534 A, US5333111 A, US5216614 A, US5132915 A, US5039848 A, US5038293 A, US5036472 A, US5029099 A, US5017953 A, US4873643 A, US4805501 A, US4799172 A, US4646327 A, US4549454 A, US272354 A, US2002154905 AA, JP9226194 A2, JP9066636 A2, JP2000101953 A2, JP101953, FR1002253 A, EP1223461 A1, DK47527 A,

**Forward Citations:** WO16079273, WO15114767, WO15061131, WO13106866, WO07009100, USD551300, US9943976, US9811704, US9582699, US9268984, US9114647, US8657512, US8646366, US8636431, US8616794, US8201484, US8182164, US8180144, US8079510, US8008597, US7930958, US7914869, US7845259, US7396173, US7354211, US7339705, US7204654, US7164490, US7066671, US7054708, US7007577, US6907806, US6619166, US2017252938, US2016263763, US2016232390, US2013180373, US2012048086, US2011232437, US2011197735, US2011185613, US2011081190, US2010266197, US2010257210, US2009297247, US2009211690, US2009013838, US2008100873, US2008017617, US2007227332, US2007127969, US2007092327, US2007034061, US2007017332, US2007012152, US2007012148, US2007012146, US2006238600, US2006233994, US2006206859, US2006057326, US2005271864, US2005178254, US2005155474, US2005090928, US2005001891, US2005000337, US2004008358, US2003036468, US2003012454, US2002063879, JP6329568, JP6111403, JP5324133, JP4714622, JP4030541, JP3904410, JP2015114767, JP2014133294, JP2009501643, JP2009286073, JP2007268749, JP2006123431, JP2002355792, EP1830988, EP1267563, DE102015200033,

#### Abstract:

Image data representing an image to be printed is captured, and a cutting pattern for cutting the outer form of an image printed on recording paper is selected from a plurality of different cutting patterns. In accordance with the captured image data, one or more images are printed on the recording paper in sizes and layout proper for the selected cutting pattern. Then, the outer forms of one or more images are cut on the recording paper in the selected cutting pattern. This eliminates the necessity of entering the size and layout of the image to be printed on the recording paper and editing a cutting method. Moreover, one or more images can be printed on the recording paper in a desired size and layout, and the outer forms of one or more images are cut on the recording paper in a desired cutting pattern.



|                                       |                                                                                                                                                                                                                                                                                        |          |                         |  |                         |  |  |  |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|--|-------------------------|--|--|--|
| <b>Title:</b>                         | MOVEABLE CONTROL UNIT FOR HIGH-THROUGHPUT ANALYZER                                                                                                                                                                                                                                     |          |                         |  |                         |  |  |  |
| <b>Priority:</b>                      | US19970052876P 19970716                                                                                                                                                                                                                                                                |          | US19970059639P 19970920 |  | US19970063811P 19971031 |  |  |  |
|                                       | US19980072499P 19980126                                                                                                                                                                                                                                                                |          | US19980072780P 19980127 |  | US19980075414P 19980220 |  |  |  |
|                                       | US19980075806P 19980224                                                                                                                                                                                                                                                                |          | US19980062472 19980417  |  | US19980082253P 19980417 |  |  |  |
|                                       | US19980084167P 19980504                                                                                                                                                                                                                                                                |          | US19980085335P 19980513 |  | US19980085500P 19980514 |  |  |  |
|                                       | US19980089848P 19980619                                                                                                                                                                                                                                                                |          | US19980118341 19980716  |  |                         |  |  |  |
| <b>Family:</b>                        |                                                                                                                                                                                                                                                                                        |          |                         |  |                         |  |  |  |
|                                       |  US6025985 A                                                                                                                                                                                          | 20000215 | US19980118341           |  | 19980716                |  |  |  |
|                                       |  US6071748 A                                                                                                                                                                                          | 20000606 | US19980062472           |  | 19980417                |  |  |  |
| <b>Probable Assignee:</b>             | MOLECULAR DEVICES INC                                                                                                                                                                                                                                                                  |          |                         |  |                         |  |  |  |
| <b>Assignee(s):(std):</b>             | LJL BIOSYSTEMS INC                                                                                                                                                                                                                                                                     |          |                         |  |                         |  |  |  |
| <b>Assignee(s):</b>                   | MDS ANALYTICAL TECHNOLOGIES (US) INC ; MDS ANALYTICAL TECHNOLOGIES INC ; MDS ANALYTICAL TECHNOLOGIES US INC ; MOLECULAR DEVICES CORP ; MOLECULAR DEVICES INC ; ARCTURUS BIOSCIENCE INC                                                                                                 |          |                         |  |                         |  |  |  |
| <b>Inventor(s):(std):</b>             | BURTON WILLIAM G ; EDWARDS GLENN R ; EL HAGE AMER ; LEYTES LEV J ; MARQUISS SAMUEL A ; MODLIN DOUGLAS N ; PAIK YONG ; TAYLOR MICHAEL T                                                                                                                                                 |          |                         |  |                         |  |  |  |
| <b>International class (IPC 8-9):</b> | B01L9/00 F21V21/18 G01N21/03 G01N21/17 G01N21/21 G01N21/27 G01N21/64 G01N21/76 G01N35/00 G01N35/02 G01N35/04 G01N35/10 (Advanced/Invention); C40B60/14 (Advanced/Non-invention)                                                                                                        |          |                         |  |                         |  |  |  |
| <b>International class (IPC 1-7):</b> | G01N21/01 G06F1/16                                                                                                                                                                                                                                                                     |          |                         |  |                         |  |  |  |
| <b>CPC:</b>                           | Y10S436/807 Y10S436/809 G01N21/76 B01J2219/00315 B01J2219/00317 B01J2219/00605 B01J2219/0061 B01J2219/00612 B01J2219/00659 B01J2219/00686 B01J2219/00691 B01J2219/00707 B01L9/523 B01L2300/0829 B82Y15/00 C40B60/14 Y10T436/11 Y10T436/113332 Y10T436/114165 Y10T436/115831 Y10T436/25 |          |                         |  |                         |  |  |  |
| <b>European class:</b>                | B01L9/00M B01L9/00M2 B01L9/523 B82Y15/00 G01N21/76 L01J219/00C2B4D2 L01J219/00C2B4D2B L01J219/00C4L12 L01J219/00C4L2 L01J219/00C4L2D L01J219/00C4L2F L01J219/00C6F L01J219/00C6F4 L01J219/00C6P4 L01L300/08B12 L01L9/523 M40B60/14                                                     |          |                         |  |                         |  |  |  |
| <b>US class:</b>                      | 250/459.1 250/491.1 356/317 356/318 356/417 361/679 361/679.21 361/679.44 361/724 422/104 422/503 422/505 422/52 422/63 422/65 422/82.05 422/82.08 436/164 436/174 436/43 436/807 436/809                                                                                              |          |                         |  |                         |  |  |  |

[Classification Explorer](#)

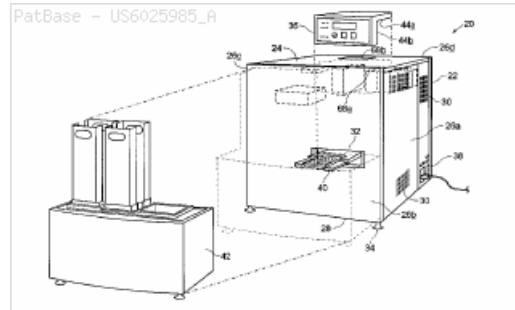
**Cited documents:** US5842582, US5825617, US5780857, US5736410, US5679310, US5676943, US5663545, US5641633, US5635402, US5633724, US5631734 A, US5626134 A, US5620894 A, US5604130 A, US5599500 A, US5595710 A, US5593867 A, US5592289 A, US5589351 A, US5589350 A, US5589136 A, US5557398 A, US5542012 A, US5537343 A, US5528046 A, US5512492 A, US5491343 A, US5487872 A, US5485530 A, US5480804 A, US5459300 A, US5457527 A, US5449921 A, US5445935 A, US5436718 A, US5420408 A, US5418371 A, US5401465 A, US5384093 A, US5361626 A, US5355215 A, US5340747 A, US5340716 A, US5323008 A, US5319436 A, US5317485 A, US5315015 A, US5275951 A, US5273718 A, US5270788 A, US5257202 A, US5225164 A, US5208651 A, US5208161 A, US5206568 A, US5192510 A, US5169601 A, US5096807 A, US5095517 A, US5091652 A, US5084246 A, US5082628 A, US5058045 A, US5047215 A, US5039219 A, US5009488 A, US4979821 A, US4968148 A, US4948442 A, US4936682 A, US4923819 A, US4892409 A, US4885087 A, US4877965 A, US4873633 A, US4868103 A, US4855930 A, US4826660 A, US4810096 A, US4784275 A, US4772453 A, US4762420 A, US4753501 A, US4741619 A, US4738825 A, US4730921 A, US4724217 A, US4707067 A, US4704255 A, US4699512 A, US4685801 A, US4626684 A, US4567847 A, US4501970 A, US4485430 A, US4451149 A, US4341957 A, US4203670 A, US4150870 A, US4144452 A, US4100416 A, US4076420 A, US4067653 A, US4011451 A, US3932023 A, US3849654 A, US3516736 A, US3423581 A, US3013467 A, US2719214 A, GB2228081, GB2215838, EP0266881,

**Forward Citations:** WO13101568, WO11081887, WO10092341, WO10092341, WO10042805, WO07127750, WO06036522, WO04059302, WO0184125, WO0165241, WO0163262, WO0075167, WO0055372, US9946017, US9931636, US9921101, US9915612, US9857367, US9856517, US9850536, US9828598, US9822410, US9745615, US9731148, US9719138, US9658161, US9624540, US9624531, US9618455, US9606068, US9587276, US9581723, US9557217, US9539577, US9523701, US9518299, US9488584, US9475025, US9443633, US9434939, US9428800, US9410891, US9399795, US9372308, US9291569, US9291568, US9273344, US9266108, US9248422, US9244069, US9223084, US9222133, US9222123, US9157864, US9075019, US9074250, US9063705, US9029802, US9017617, US8994946, US8951244, US8906626, US8906618, US8900877, US8885166, US8867038, US8865473, US8796186, US8767917, US8759795, US8725477, US8697452, US8685340, US8649011, US8643947, US8628952, US8618507, US852214, US8545772, US8487276, US8476078, US8471230, US8471219, US8467061, US8465709, US8465708, US8465699, US8460865, US8442287, US8398240, US8372340, US8311788, US8298831, US8288103, US8277753, US8274040, US8264687, US8257982, US8232535, US8229068, US8218141, US8207509, US8168443, US8149399, US8124024, US8105554, US8072585, US8053742, US8029746, US8029745, US7995202, US7961314, US7957507, US7949383, US7910356, US7910062, US7901897, US7887752, US7839972, US7838847, US7834329, US7833719, US7820983, US7805081, US7787126, US7782454, US7773788, US7754148, US7745142, US7727473, US7715001, US7692783, US7682565, US7678330, US7666360, US7663092, US7659968, US7643661, US7639854, US7639853, US7632651, US7630073, US7626704, US7612020, US7609809, US7604983, US7574251, US7567694, US7566173, US7547556, US7522282, US7510841, US7474399, US7474398, US7466418, US7455971, US7430044, US7426446, US7423749, US7423748, US7405831, US7396650, US7390458, US7383078, US7369220, US7348587, US7336354, US7226734, US7223985, US7177024, US7150966, US7142400, US7142400, US7138254, US7122659, US7070921, US7060431, US7033754, US6998274, US6992761, US6991765, US6987563, US6982431, US6970241, US6944407, US6934030, US6881587, US6878949, US6858394, US6835574, US6825921, US6821787, US6814933, US6798520, US6771367, US6760109, US6759247, US6743633, US6740890, US6699655, US6689565, US6683483, US6586257, US6576476, US6566143, US6528801, US6525816, US6514465, US6499366, US6498335, US6493600, US6486947, US6483582, US6469311, US6466316, US6448089, US6429027, US6369894, US6329661, US6326605, US6317207, US6297018, US6258326, US6252235, US6236456, US6201690, US2017205614, US2015247806, US2015080256, US2014328977, US2013170931, US2013004954, US2012309103, US2012300194, US2011236960, US2011216404, US2011192992, US2011144627, US2011140001, US2011136684, US2011122366, US20111082051, US2011020178, US2011004448, US2011004447, US2010331212, US2010315705, US2010279332, US2010277725, US2010239471, US2010167413, US2010148091, US2010065726, US2009298716, US2009263913, US2009263904, US2009259446, US2009227472, US2009130772, US2009015923, US2008304073, US2008277595, US2008253927, US2008230605, US2008226307, US2008212960, US2008191149, US2008186477, US2008175755, US2008165346, US2008157005, US2008152281, US2008152280, US2008144899, US2008129981, US2008128627, US2008117421, US2008108112, US2008080059, US2008030628, US2007273876, US2007271055, US2007268487, US2007268486, US2007259366, US2007257202, US2007248494, US2007231217, US2007207483, US2007207058, US2007206187, US2007195922, US2007195321, US2007188750, US2007161071,

US2007103687, US2007087431, US2007076846, US2007036511, US2007003436, US2006290926, US2006275918, US2006256676, US2006256350, US2006226374, US2006203244, US2006203243, US2006193752, US2006121442, US2006105453, US2005280811, US2005233318, US2005231714, US2005219535, US2005219407, US2005219373, US2005219358, US2005148846, US2005148066, US2005112773, US2005012929, US2004246484, US2004239922, US2004238756, US2004219063, US2004185482, US2004171166, US2004120455, US2004110301, US2004058406, US2004057870, US2004051051, US2004036036, US2004033531, US2003175815, US2003170732, US2003127609, US2003123058, US2003117705, US2003095893, US2003095259, US2003085362, US2003022246, US2003003594, US2003001122, US2002192716, US2002146836, US2002146345, US2002132221, US2002098593, US2002090320, US2002037237, US10072982, US10065189, US10047391, US10040071, US10018764, KR101181067, FR2849196, EP2256535, EP2159567, EP2012125, EP1906172, EP1760455, EP1366351, EP1299708, EP1299708, EP1156329, AU2008263770, AU2001253793,

**Abstract:**

A moveable control unit for a high-throughput analyzer that can be operatively mounted at a plurality of locations on the analyzer housing.



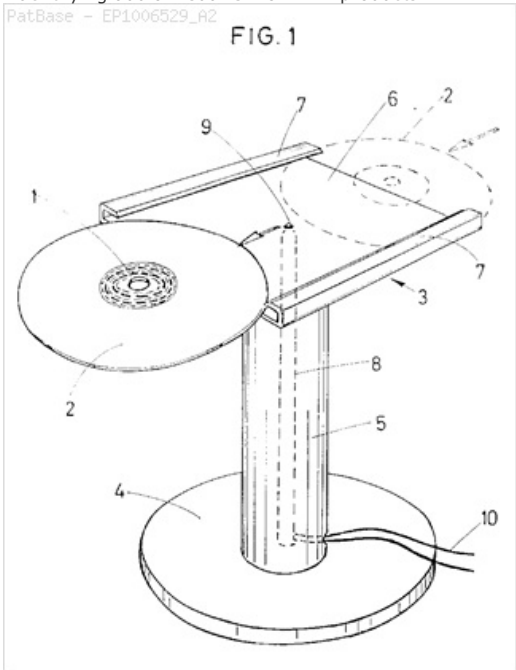


**Title:** Improved bar-code and bar-code reading device  
**Priority:** ES19980002689U 19981026  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT262212 E         | 20040415         | AT19990500193T     | 19991022         |
| DE69915568 D1      | 20040422         | DE19996015568      | 19991022         |
| DE69915568 T2      | 20050324         | DE19996015568T     | 19991022         |
| EP1006529 A2       | 20000607         | EP19990500193      | 19991022         |
| EP1006529 A3       | 20010808         | EP19990500193      | 19991022         |
| EP1006529 B1       | 20040317         | EP19990500193      | 19991022         |
| ES2218973 T3       | 20041116         | ES19990500193T     | 19991022         |
| PT1006529 T        | 20040831         | PT19990500193T     | 19991022         |

**Probable Assignee:** 2B FANTASTIC  
**Assignee(s):(std):** 2B FANTASTIC S L ; B FANTASTIC S L ; HASSON FONT DORA  
**Assignee(s):** 2B FANTASTIC  
**Inventor(s):(std):** B FANTASTIC S L ; HASSON FONT DORA  
**Inventor(s):** 2B FANTASTIC ; 2B FANTASTIC S L  
**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE  
**International class (IPC 8-9):** G11B23/38 (Advanced/Invention); G11B23/38 (Core/Invention)  
**International class (IPC 1-7):** A61K31/235 A61K31/38 G06K19/06 G06K7/10 G11B17/04 G11B23/03 G11B23/30 G11B23/38 G11B23/40 G11B25/04 G11B33/04  
**CPC:** G11B23/38  
**European class:** G11B23/38  
[Classification Explorer](#)  
**Cited documents:** US5729464 A, US5319184 A, US4677604 A, EP0538488 A1,  
**Forward Citations:** US9582699, US9268984,

**Abstract:**  
The invention consists of arranging a concentric bar-code (1) about the spin axis of a product, such as a CD (2), the bar-code being read and subsequently identified by means of a reading device (3), comprising a base (4) from which a column (5) projects, ending at the top in a deck (6) provided with side tracks (7) compatible with a sliding CD (2), being particular in that the column (5) axially houses a reading element (8) the end (9) of which projects in a position matching the longitudinal axis of the deck (6), wherein upon the CD (2) being passed lengthways along the deck (6) between the tracks (7), in order for the concentric bar-code (1) to lie on said deck, the reading element (8) diametrically crosses said concentric bar-code (1), reading it and identifying the product comprising it (fig. 1). The invention is applicable for identifying audio-visual CD or DVD products.

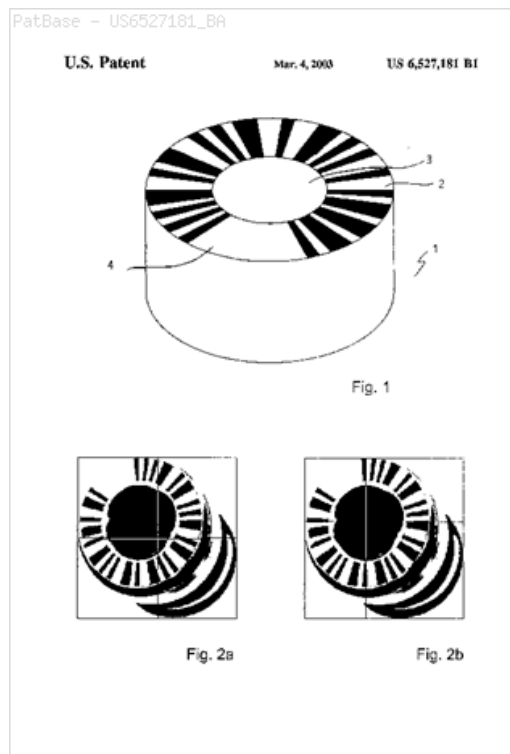


**Title:** Device and method for characterizing and identifying an object**Priority:** DE19991010226 19990309**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE19910226 A1      | 20000921         | DE19991010226      | 19990309         |
| DE19910226 B4      | 20070524         | DE19991010226      | 19990309         |
| GB200005704 A0     | 20000503         | GB20000005704      | 20000309         |
| GB2347663 A1       | 20000913         | GB20000005704      | 20000309         |
| US6527181 BA       | 20030304         | US20000517329      | 20000302         |

**Probable Assignee:** BRUKER CORP**Assignee(s):(std):** BRUKER ANALYTIK GMBH ; BRUKER BIOSPIN GMBH ; BRUKER CORP**Inventor(s):(std):** HOEPFEL DIETER ; KLEEBERG HANS JOACHIM ; REISS VOLKER ; REIS VOLKER**Inventor(s):** VOLKER REISS ; DIETER HOEPFEL ; HANS JOACHIM KLEEBERG**International class (IPC 8-9):** B65B61/26 B65D51/24 G06K19/04 G06K19/06 G09F3/02 (Advanced/Invention); B65B61/00 B65D51/24 G06K19/04 G06K19/06 G09F3/02 (Core/Invention)**International class (IPC 1-7):** B65B61/26 B65D23/14 G01N24/08 G01N35/00 G06K19/06 G06K7/10 G09F3/02**CPC:** B65D51/245 B65D2203/06 G06K19/06018 G06K2019/06243 G09F3/0295**European class:** B65D51/24F G06K19/06C1 G09F3/02E L65D203/06 S06K19/06W6**US class:** 235/462.03 235/462.04 235/462.07[Classification Explorer](#)**Cited documents:** WO9319445 A1, WO8300243 A1, US6081627 A, US5861613 A, US5798514 A, US5235169 A, US5046841 A, US4493989 A, US4478095 A, US3963918 A, US3752961 A, US3743820 A, GB2154775 A1, EP0706146 A2, DE4000197 A1, DE2429160 A1,**Forward Citations:** WO11000798, WO07032569, WO06028571, WO05067533, WO0228739, USD737377, US9582699, US9268984, US8763907, US8746565, US8733658, US8733657, US8517281, US8297513, US8104688, US8079522, US7394383, US7380717, US7209575, US7124947, US7124947, US6845177, US6802454, US2013014648, US2012080842, US2009309303, US2008191023, US2006092013, US2006050949, US2006000911, US2005150957, US2005082376, US2003087694, US2001055425, RU2546570, JP6164635, JP5789658, JP5785610, JP2014166864, JP2013526317, JP2013526316, DE10320383, DE10146624, CN103793735, CN103793735, CN102473237, AU2010268091,**Abstract:**

A device and a method for characterizing and identifying an object, e.g. a container, with a surface visible from outside the object, onto which is disposed an optically readable one-dimensional bar code consisting of bars and spaces, are characterized in that the bar code is disposed in an annular range (2) of the surface, that the bars and spaces extend in a star-like manner from a center of the annular area (2) to the outside and that the bar code is read in the circumferential direction of the annular area (2). This device and method enable automatic detection, recognition and identification of objects, like e.g. sample bottles for spectroscopic analysis in a simple technically undemanding and cheap manner, wherein automatic identification of hollow, in particular hollow cylindrical objects can also be easily realized.



**Title:** OPTICAL DISK, AN OPTICAL DISK BARCODE FORMING METHOD, AN OPTICAL DISK REPRODUCTION APPARATUS, A MARKING FORMING APPARATUS, A METHOD OF FORMING A LASER MARKING ON AN OPTICAL DISK, AND A METHOD OF MANUFACTURING AN OPTICAL DISK

**Priority:** US19960649411 19960516 US19990401669 19990922

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | US6144742 A        | 20001107         | US19990401669      | 19990922         |

**Probable Assignee:** MATSUSHITA ELECTRIC IND CO LTD

**Assignee(s):(std):** MATSUSHITA ELECTRIC IND CO LTD

**Assignee(s):** MITSUSHITA ELECTRIC INDUSTRIAL CO ; MITSUSHITA ELECTRIC INDUSTRIAL CO LTD

**Inventor(s):(std):** GOTOH YOSHIHO ; KOISHI KENJI ; MORIYA MITSURO ; OSHIMA MITSUAKI ; TANAKA SHINICHI

**International class** H04L9/00 (Advanced/Invention);

**(IPC 8-9):** H04L9/00 (Core/Invention)

**International class** H04L9/00  
(IPC 1-7):

**CPC:** H04L9/32 G11B20/00115 G11B20/00123 G11B20/0021 G11B20/1217 G11B20/1833 G11B2020/122  
G11B2020/1288 G11B2020/1836 G11B2220/237 G11B2220/2537 H04L2209/60

**US class:** 369/53.21 380/201 380/4

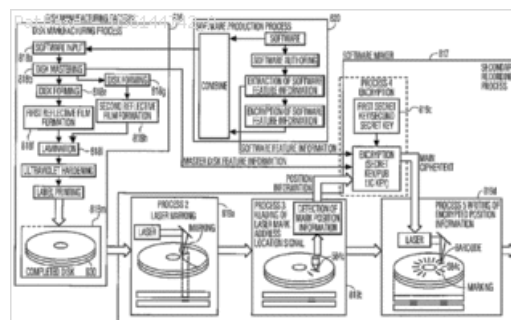
## Classification Explorer

**Cited documents:** US5826156 A, US5807640 A, US5761301 A, US5706266 A, US5706047 A, US5696757 A, US5587984 A, US5513169 A, US5489768 A, US5457746 A, US5457668 A, US5430281 A, US5400403 A, US5392351 A, US5196111 A, US5065429 A, US4677604 A, NL9101358 A, JP56346541, JP563298717, JP563160403, JP56171487, JP561190734, JP560193143, JP58211343, JP5625242, JP8102133 A2, JP7325712 A2, JP7121907 A2, JP7085574 A2, JP63298717 A2, JP63164043 A2, JP63046541 A2, JP6203412 A2, JP61190734 A2, JP61071487 A2, JP60193143 A2, JP58211343 A2, JP56025242 A2, JP5325193 A2, JP5266576 A2, JP4178967 A2, JP4162224 A2, JP2232831 A2, JP2056750 A2, JP2044448 A2, JP2007243 A2, EP0741382 A1, EP0553545 A2, EP0549488 A1, EP0545472 A1, DE4308680 A1, DE4304680 A1,

**Forward Citations:** US9811704, US9582699, US9268984, US8320569, US8164992, US8090239, US7911929, US7852730, US7660415, US7486790, US7303803, US7236439, US7124944, US7035187, US6638593, US6589626, US6490408, US2016232390, US2010086135, US2009147664, US2007294714, US2005243691, US2004114489, US2003152009, AU2007202951,

**Abstract:**

Disclosed is an optical disk barcode forming method wherein, as information to be barcoded, position information for piracy prevention, which is a form of ID, is coded as a barcode and is recorded by laser trimming on a reflective film in PCA area of an optical disk. When playing back the thus manufactured optical disk on a reproduction apparatus, the barcode data can be played back using the same optical pickup.



| Title:                                                                                            | SYSTEM FOR MACHINE READING AND PROCESSING INFORMATION FROM GAMING CHIPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
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| Priority:                                                                                         | US19990335100 19990617                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | WO2000US14102 20000523 |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|                                                                                                   | US20060530286 20060908                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    | US20070929413 20071030 |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Family:                                                                                           | <table><tr><th>Publication number</th><th>Publication date</th><th>Application number</th><th>Application date</th></tr><tr><td> AU2000055888 A1</td><td>20010109</td><td>AU200000055888</td><td>20000523</td></tr><tr><td> AU2000055888 A5</td><td>20010109</td><td>AU200000055888D</td><td>20000523</td></tr><tr><td> AU776371 B2</td><td>20040909</td><td>AU200000055888</td><td>20000523</td></tr><tr><td> US2003087694 AA</td><td>20030508</td><td>US20020321020</td><td>20021217</td></tr><tr><td> US2007066388 AA</td><td>20070322</td><td>US20060530286</td><td>20060908</td></tr><tr><td> US2008045333 AA</td><td>20080221</td><td>US20070929413</td><td>20071030</td></tr><tr><td> US6514140 BA</td><td>20030204</td><td>US19990335100</td><td>19990617</td></tr><tr><td> US7124947 BB</td><td>20061024</td><td>US20020321020</td><td>20021217</td></tr><tr><td> US7753781 BB</td><td>20100713</td><td>US20070929413</td><td>20071030</td></tr><tr><td> WO0078419 A1</td><td>20001228</td><td>WO2000US14102</td><td>20000523</td></tr></table> |                    |                        |  | Publication number | Publication date | Application number | Application date |  AU2000055888 A1 | 20010109 | AU200000055888 | 20000523 |  AU2000055888 A5 | 20010109 | AU200000055888D | 20000523 |  AU776371 B2 | 20040909 | AU200000055888 | 20000523 |  US2003087694 AA | 20030508 | US20020321020 | 20021217 |  US2007066388 AA | 20070322 | US20060530286 | 20060908 |  US2008045333 AA | 20080221 | US20070929413 | 20071030 |  US6514140 BA | 20030204 | US19990335100 | 19990617 |  US7124947 BB | 20061024 | US20020321020 | 20021217 |  US7753781 BB | 20100713 | US20070929413 | 20071030 |  WO0078419 A1 | 20001228 | WO2000US14102 | 20000523 |
| Publication number                                                                                | Publication date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Application number | Application date       |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  AU2000055888 A1 | 20010109                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | AU200000055888     | 20000523               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  AU2000055888 A5 | 20010109                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | AU200000055888D    | 20000523               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  AU776371 B2     | 20040909                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | AU200000055888     | 20000523               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  US2003087694 AA | 20030508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US20020321020      | 20021217               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  US2007066388 AA | 20070322                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US20060530286      | 20060908               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
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|  US6514140 BA    | 20030204                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US19990335100      | 19990617               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  US7124947 BB    | 20061024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US20020321020      | 20021217               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  US7753781 BB    | 20100713                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | US20070929413      | 20071030               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
|  WO0078419 A1    | 20001228                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | WO2000US14102      | 20000523               |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Probable Assignee:                                                                                | BALLY GAMING INC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Assignee(s):(std):                                                                                | CIAS INC ; STORCH LEONARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Assignee(s):                                                                                      | SHFL ENTERTAINMENT INC ; SIERRA DESIGN GROUP ; DEUTSCHE BANK TRUST CO AMERICAS<br>COLLATERAL AGENT AS ; SHFL ENTERTAINMENT INC WAS KNOWN SHUFFLE MASTER INC AS ; ARCADE<br>PLANET INC ; BALLY GAMING INC ; BALLY GAMING INT INC ; BALLY TECHNOLOGIES INC ; BANK OF<br>AMERICA NA ADMINISTRATIVE AGENT AS ; BANK OF AMERICA NA COLLATERAL AGENT AS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Inventor(s):(std):                                                                                | LEONARD STORCH ; STORCH LEONARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Agent(s):                                                                                         | WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY<br>LTD; THELEN REID BROWN RAYSMAN AND STEINER LLP; FROMMER LAWRENCE AND HAUG;<br>BROWNRAYSMAN MILLSTEIN FELDER STEINER LLP; FROMMER LAWRENCE AND HAUG LLP; FRANK J                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| Designated states:                                                                                | AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA<br>GB GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK<br>ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA<br>UG UZ VN YU ZW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| International class<br>(IPC 8-9):                                                                 | A63B71/06 A63F13/12 A63F9/24 G06K19/06 G06K7/10 G07F1/06 G07F17/32 (Advanced/Invention);<br>A63F1/18 A63F9/24 (Advanced/Non-invention)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| International class<br>(IPC 1-7):                                                                 | A63F13/00 A63F9/24 G06F17/00 G06K9/00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
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| European class:                                                                                   | G07F1/06 G07F17/32 G07F17/32C4D G07F17/32E6D2 G07F17/32K G07F17/32K10 G07F17/32K4<br>K63F9/24N2B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |
| US class:                                                                                         | 235/462.01 235/462.04 235/462.06 235/494 273/138.1 273/139 463/13 463/22 463/25 463/25P 463/29<br>463/29P 463/42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                        |  |                    |                  |                    |                  |                                                                                                   |          |                |          |                                                                                                   |          |                 |          |                                                                                               |          |                |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                   |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |                                                                                                |          |               |          |

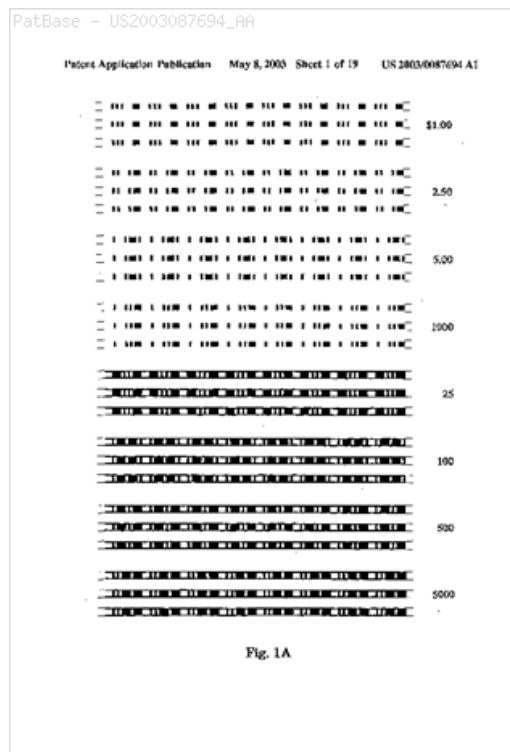
[Classification Explorer](#)

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| Cited documents:   | WO9713227 A1, WO9710577 A1, WO9609100 A1, WO9607153 A1, WO8603605 A1, WO10000577,<br>WO0010577, USRE4003 E, USRE34003 E, US7201661 BB, US6929546 BB, US6527181 BA, US6511280<br>BA, US6490705 BA, US6460848 BA, US6379247 BA, US6374382 BA, US6371852 BA, US6317462 BA,<br>US6302793 BA, US6267671 BA, US6200218 BA, US6186895 BA, US6165069 A, US6141441 A,<br>US6047892 A, US6042011 A, US6003013 A, US5992745 A, US5957776 A, US5941769 A, US5919090 A,<br>US5889270 A, US5861613 A, US5853252 A, US5831527 A, US5811787 A, US5809482 A, US5788574 A,<br>US5781647 A, US5770533 A, US5767498 A, US5761647 A, US5745510 A, US5735742 A, US5707287 A,<br>US5675137 A, US5651548 A, US5619027 A, US5613912 A, US5605334 A, US5586936 A, US5572009 A,<br>US5572004 A, US5548110 A, US5489767 A, US5471533 A, US5440142 A, US5438188 A, US5430283 A,<br>US5429361 A, US5414251 A, US5412196 A, US5393067 A, US5389770 A, US5380998 A, US5377207 A,<br>US5369260 A, US5337361 A, US5311001 A, US5290033 A, US5283422 A, US5265104 A, US5260556 A,<br>US5235618 A, US5224106 A, US5220234 A, US5144314 A, US5123352 A, US5110134 A, US5107506 A,<br>US5103081 A, US5087137 A, US4899392 A, US4818969 A, US4814589 A, US4755941 A, US4705939 A,<br>US4660221 A, US4644143 A, US4597083 A, US4531187 A, US4282426 A, US4191970 A, US4174890 A,<br>US4096378 A, US4059825 A, US4044227 A, US4024511 A, US4013997 A, US3896917 A, US3862400 A,<br>US3838251 A, US3792236 A, US3784792 A, US3723710 A, US3672722 A, US3671722 A, US3622758 A,<br>US3552142 A, US3543007 A, US3541310 A, US2612994 A, GB2140948 A1,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Forward Citations: | WO18016195, WO16053521, WO09061614, WO03015042, WO03015042, USRE46826, USRE46505,<br>USD764599, USD705364, USD692068, USD692067, USD692066, USD688241, USD687829, USD687435,<br>USD686208, USD680537, US9993719, US9940776, US9922502, US9908034, US9901810, US9889377,<br>US9861881, US9861880, US9852582, US9849368, US9839837, US9830776, US9802114, US9789385,<br>US9786123, US9786120, US9764221, US9751000, US9744436, US9734667, US9734481, US9731190,<br>US9717979, US9713761, US9704174, US9700785, US9687727, US9679603, US9659461, US9659440,<br>US9652735, US9633523, US9623317, US9616324, US9613487, US9600968, US9566501, US9561426,<br>US9542809, US9539495, US9539494, US9536388, US9536379, US9514610, US9511274, US9508224,<br>US9504905, US9478099, US9474957, US9452349, US9452346, US9443377, US9430901, US9424713,<br>US9411944, US9406194, US9406193, US9387390, US9378766, US9370710, US9355518, US9345952,<br>US9345951, US9339723, US9333415, US9320964, US9306952, US9289677, US9280648, US9269235,<br>US9266012, US9266011, US9259640, US9245416, US9233298, US9220972, US9220971, US9196121,<br>US9183693, US9162138, US9105152, US9098975, US9092944, US9015237, US9011225, US9005034,<br>US8998692, US8998211, US8979646, US8974302, US8973821, US8961298, US8956231, US8950669,<br>US8944904, US8944320, US8939359, US8931779, US8920236, US8905834, US8899477, US8876608,<br>US8870647, US8840018, US8833650, US8821268, US8814648, US8807427, US8795061, US8794518,<br>US8789752, US8784211, US8784197, US8783563, US8777710, US8763901, US8753194, US8740065,<br>US8734245, US8727851, US8719328, US8708805, US8702101, US8696443, US8695876, US8690679,<br>US8684265, US8678912, US8668146, US8662500, US8652918, US8651485, US8647191, US8645709,<br>US8636285, US8635126, US8632406, US8628396, US8622838, US8616967, US8616959, US8613658,<br>US8613655, US8606002, US8597115, US8597107, US8581721, US8579289, US8567784, US8562424,<br>US8556263, US8550464, US8545321, US8538155, US8511684, US8510567, US8506400, US8505916,<br>US8504617, US8490973, US8485907, US8482583, US8480484, US8449364, US8430749, US8425313,<br>US8419521, US8408551, US8403739, US8403221, US8403214, US8403207, US8397985, US8387137,<br>US8387136, US8382584, US8382582, US8366542, US8366109, US8353751, US8353513, US8348745,<br>US8342932, US8342533, US8342525, US8319601, US8308568, US8292741, US8285034, US8282473,<br>US8272945, US8262469, US8251791, US8246450, US8221224, US8210927, US8206212, US8205884,<br>US8192283, US8192277, US8191894, US8182373, US8172660, US8170323, US8162756, US8162737,<br>US8157631, US8152615, US8150158, US8150157, US8137174, US8123604, US8118669, US8118305, |

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# **Abstract:**

A fully automatic table game player tracking system for Blackjack and other casino games wherein players have individual betting positions on the table is disclosed. An individual B and W CCD chip reading turret is placed inches in front of each player's betting position to scan wagered chips using ambient casino lighting. The turret also has a "comp" light to indicate to the player at the beginning of every hand that his bet was read credited for his complimentary (meals, room, entertainment, etc.), thus delivering to the player extra gaming satisfaction every hand. Patterns of repeated coding around the playing chips' peripheral surface represent with light and dark contrasting colors the dollar value and particular casino issuer of the chips. The aesthetically pleasing chip identifying coding patterns are comprised of unique referenceless error controlled self-clocking (n,k) code words, which are repeated around the chip's periphery without space therebetween, for improved efficiency and accuracy no matter the orientation of the wagered chip placed on the table.



**Title:** ESPRESSO BREWING DEVICE  
**Priority:** DE20012005672U 20010331 DE20025004184 20020320 WO2002EP03281 20020320  
**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR034584 AA        | 20040303         | AR2002P101103      | 20020326         |
| AT303741 E         | 20050915         | AT20020735167T     | 20020320         |
| AU2002310977 AA    | 20021015         | AU20020310977      | 20020320         |
| AU2002310977 BB    | 20070118         | AU20020310977      | 20020320         |
| CA2442259 AA       | 20030926         | CA20022442259      | 20020320         |
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| DE20105672 U1      | 20010913         | DE20012005672U     | 20010331         |
| DE50204184 D1      | 20051013         | DE20025004184      | 20020320         |
| DK1379154 T3       | 20060123         | DK20020735167T     | 20020320         |
| EP1379154 A1       | 20040114         | EP20020735167      | 20020320         |
| EP1379154 B1       | 20050907         | EP20020735167      | 20020320         |
| ES2245401 T3       | 20060101         | ES20020735167T     | 20020320         |
| IL157863 A0        | 20040328         | IL20020157863      | 20020320         |
| IL157863 A1        | 20080210         | IL20020157863      | 20020320         |
| JP2004529693 T2    | 20040930         | JP20020576774T     | 20020320         |
| JP3891286 B2       | 20070314         | JP20020576774T     | 20020320         |
| MY134569 A         | 20071231         | MY20020001155      | 20020329         |
| NO20034326 A       | 20031121         | NO20030004326      | 20030926         |
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| NO323733 B1        | 20070702         | NO20030004326      | 20030926         |
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| US6820535 BB       | 20041123         | US20030473398      | 20030930         |
| WO02078499 A1      | 20021010         | WO2002EP03281      | 20020320         |
| ZA200307554 A      | 20040728         | ZA20030007554      | 20030929         |

**Probable Assignee:** NESTEC SA  
**Assignee(s):(std):** EUGSTER FRISMAG AG ; EUGSTER FRISMAG AG ROMANSHORN ; EUGSTER FRISMAG ROMANSHORN AG ; FISCHER DANIEL ; NESTEC S A ; NESTEC SA  
**Assignee(s):** NESTEC S A VEVEY ; NESTEC AVENUE NESTLE SA  
**Inventor(s):(std):** DANIEL FISCHER ; FISCHER DANIEL  
**Agent(s):** SHELSTON IP PTY LTD; SHELSTON IP; BORDEN LADNER GERVAIS LLP; SANFORD TCOLB AND CO; DR YITZHAK HESS AND PARTNERS  
**Designated states:** AE AM AT AU AZ BE BF BJ BR BY CA CF CG CH CI CM CN CY CZ DE DK ES FI FR GA GB GH GM GN GQ GR GW HU ID IE IL IT JP KE KG KZ LI LS LU MA MC MD ML MR MW MX MZ NE NL NO PH PL PT RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TZ UA UG US ZA ZM ZW  
**International class (IPC 8-9):** A47J31/36 A47J31/40 A47J31/44 (Advanced/Invention); A47J31/24 A47J31/40 A47J31/44 (Core/Invention)  
**International class (IPC 1-7):** A23F3/00 A47J31/00 A47J31/40 A47J31/44  
**CPC:** A47J31/3642 A47J31/3628 A47J31/3633 A47J31/3638 A47J31/4492  
**European class:** A47J31/36A4B A47J31/36A4D A47J31/36A4F A47J31/36A4H A47J31/40B A47J31/40B2 A47J31/40H A47J31/44H  
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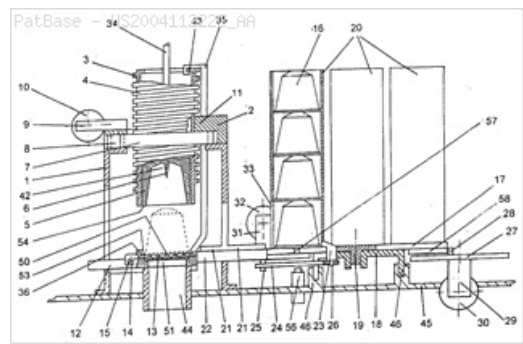
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**Cited documents:** US6095032 A, US5637335 A, US5242702 A, US4920870 A, US4873915 A, US4724752 A, US4602558 A, US4136202 A, US3812273 A, US3713377 A, US2939381 A, FR1564088 A, EP1002490 A1, EP0455337 B1, DE69602713 T2, DE69400787 T2, DE20015903 U1,

**Forward Citations:** WO17081055, WO16087474, WO16005417, WO16005352, WO16005351, WO16005350, WO16005349, WO16005348, WO13035120, WO13032162, WO13032162, WO13032162, WO12104760, WO10137964, WO10108700, WO09133570, WO09133570, WO09133569, WO09133569, WO07045553, WO07042588, WO06021405, WO06021405, WO05077811, WO05077811, WO04045350, WO03039309, USD649390, US9981801, US9980596, US9833104, US9676538, US9457928, US9439534, US9386879, US9242791, US9161654, US9062912, US8833241, US8784915, US8733229, US8677888, US8616117, US8607691, US8272319, US8250972, US7798054, US7673559, US7581658, US7231279, US7059239, US7013797, US2017196397, US2017174419, US2017049261, US2017020328, US2015257586, US2015238043, US2015157169, US2015108108, US2013142931, US2013078342, US2013014648, US2012295234, US2011020508, US2011011273, US2010326283, US2010251901, US2010058932, US2008302251, US2008200848, US2008148948, US2007151459, US2007068394, US2006124659, US2005160919, US2005038559, US10070751, US10034573, US10022511, US10011421, KR101555543, KR101271789, KR101260504, JP4879898, JP2015180293, JP2014511712, JP2014030768, JP2013529528, JP2013517028, JP2013517027, JP2012530536, JP2011522568, JP2011518597, JP2008534190, JP2008534094, JP2008510540, JP2007525385, JP2004283566, ITRM20110458, ITGE20100014, ITBO20110039, ES2245618, EP3092924, EP2608705, EP2306417, EP2298667, EP2274210, EP2274210, EP2062831, EP1784344, EP1767129, EP1767129, EP1716069, EP1586534, EP1502527, EP1447034, DE20302410, DE202004014739, DE102004016194, DE102004016194, DE102004004833, DE102004004818, DE102004004818, CN105030073, CN103841860, CN103442624, CN103442624, CN102781290, AU2008355536, AU2008355535, AU2005212825,

#### Abstract:

An espresso brewing device with a brewing unit, a magazine able to rotate via an electric motor and equipped with a magazine table (17) supporting several magazine tubes (20) located along its circumference and open below for holding single-serving capsules (16) containing coffee powder is provided with means for the individual dispensing of single-serving capsules (16) into the brewing unit and with a control system for controlling the rotation of the magazine table (17) up to the point where a magazine tube (20) containing the desired coffee type is in the dispensing position. In order to facilitate access to functionally-important parts, particularly the magazine, that are housed securely inside a casing, the brewing unit, the capsule conveying device and the magazine are positioned on a support frame (45) whereby the magazine, supported by a magazine drawer (18), is able to be pulled out.



**Title:** Bar-code with reflective and non-reflective stripes to increase contrast and hence range at which laser scanner may be used

**Priority:** NL20001015029 20000427 NL20001015150 20000510

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | NL1015029 C 1      | 20011030         | NL20001015029      | 20000427         |
|         | NL1015150 C 1      | 20011030         | NL20001015150      | 20000510         |

**Probable Assignee:** SCANGINEERS B V

**Assignee(s):(std):** SCANGINEERS B V ; SCANGINEERS BV

**Inventor(s):(std):** AS MARCEL DAVID VAN ; ERIK KOOI ; KOOI ERIK ; MARCEL DAVID VAN AS

**International class (IPC 8-9):** G06K19/06 G06K7/12 (Advanced/Invention);  
G06K19/06 G06K7/12 (Core/Invention)

**International class (IPC 1-7):** G06K1/12 G06K19/02 G06K7/10

**CPC:** G06K7/12 G06K19/06028 G06K19/06046 G06K2019/0629

**European class:** G06K19/06C1B G06K19/06C5 G06K7/12 S06K19/06W16

[Classification Explorer](#)

**Forward Citations:** WO13072326, WO13072239, US9868588, TWI569759, RU2604798, JP2014533156, GB2370249, CN103945743, CN103945743, CN103930008, CN103930008, AU2012338982, AU2012338892,

#### Abstract:

The base (11) is of retro-reflective material and serves as the first stripe (14). The second stripe (15) of light-absorbent material is applied by conventional printing methods. An inverse construction could be used, together with mirror-reflective stripes.

PatBase - NL1015029\_C1

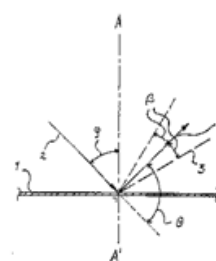


Fig. 1a

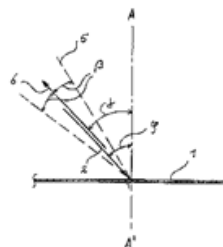


Fig. 1b

10 15 029

Title:

Priority:

Family:

BAR CODE SYSTEM

GB20000015222 20000621

WO2001GB02720 20010620

| Publication number | Publication date | Application number | Application date |
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| AU2001274278 AA    | 20020102         | AU20010274278      | 20010620         |
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| AU200174278 A5     | 20020102         | AU20010074278      | 20010620         |
| DE60143943 D1      | 20110310         | DE20016043943      | 20010620         |
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| EP1297490 B1       | 20110126         | EP20010940778      | 20010620         |
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| US2003121979 AA    | 20030703         | US20020048310      | 20021115         |
| WO0199047 A1       | 20011227         | WO2001GB02720      | 20010620         |

Probable Assignee:

Assignee(s):(std):

Assignee(s):

Inventor(s):(std):

Inventor(s):

Agent(s):

Designated states:

International class (IPC 8-9):

International class (IPC 1-7):

CPC:

European class:

US class:

CANON INC

BELL MALCOLM REGINALD HALLAS ; HAENS JOSEPH PAUL MARIETTE D ; HALLAS BELL MALCOLM REGINALD ; JANSEN JAN ; MONEY CONTROLS PLC ; MONEY CONTROLS PLC ROYTON

CANON INC ; CANON KK ; D HAENS JOSEPH PAUL MARIETTE

HAENS JOSEPH PAUL MARIETTE D ; JANSEN JAN ; HALLAS BELL MALCOLM REGINALD ; D HAENS JOSEPH PAUL MARIETTE ; BELL MALCOLM REGINALD HALLAS ; D HAENS JOSEPH PAUL ; BELL MALCOLM REGINALD

MALCOLM REGINALD HALLAS BELL ; JOSEPH PAUL MARIETTE D HAENS ; JAN JANSEN

WALASKI JAN FILIP

AT AU BE CH CY DE DK ES FI FR GB GR IE IT JP LU MC NL PT SE TR US ZA

G06K19/06 (Advanced/Invention);  
G06K19/06 (Core/Invention)

G06K19/06 G06K7/10

G06K19/06028 G06K2019/06243

G06K19/06C1B S06K19/06W6

235/462.03

[Classification Explorer](#)

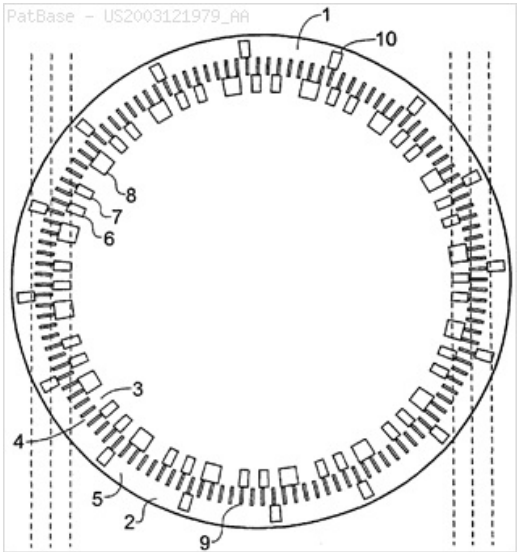
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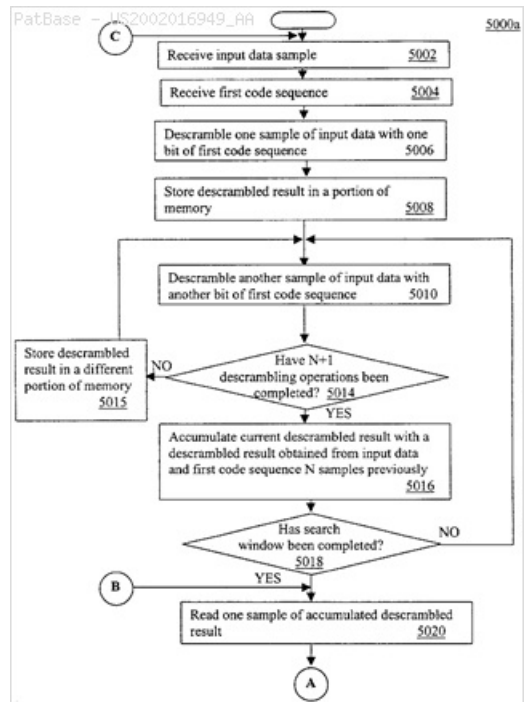
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WO11000798, WO10036609, WO10036514, US9811704, US9665816, US9582699, US9501730, US9268984, US8517281, US7878415, US7434740, US2016232390, US2010078480, US2009090786, US2005189418, EP3023362, CN103119605, CN103119605, AU2009296901,

**Abstract:**  
A bar code comprises a data track (3; 104; 205; 304) and a clock track (4; 103; 204; 303). The separate clock track (4; 103; 204; 303) means that the sampling of the be synchronised with the movement of the bar code. The addition of a reference track (5; 105; 206) enables the forming of the bar code into a ring containing a plurality of repetitions of the encoded data. The bar codes may form a continuous ring themselves or be discrete blocks arranged in a ring. Consequently, a coin-like object (1; 101; 201), such as a coin or a token, can be marked with the bar code and the bar code can be read as the coin-like object (1; 101; 201) falls past an optical sensing station (26, 27, 226, 227) with sensors for reading respectively the clock data and reference tracks.



|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                                  |                  |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------|------------------|
| Title:                                  | FLEXIBLE PREAMBLE PROCESSING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                                  |                  |
| Priority:                               | US2000022855P 20000803<br>US20010922406 20010803                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  | EP20010967953 20010803<br>WO2001US24630 20010803 |                  |
| Family:                                 | Publication number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Publication date | Application number                               | Application date |
|                                         | AU2001288233 AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20020218         | AU20010288233                                    | 20010803         |
|                                         | AU200188233 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20020218         | AU20010088233                                    | 20010803         |
|                                         | AU200188233 A5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20020218         | AU20010088233                                    | 20010803         |
|                                         | DE60148693 D1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20140515         | DE20016048693                                    | 20010803         |
|                                         | EP1320936 A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20030625         | EP20010967953                                    | 20010803         |
|                                         | EP1320936 B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20140402         | EP20010967953                                    | 20010803         |
|                                         | US2002016949 AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20020207         | US20010922406                                    | 20010803         |
|                                         | US6694496 BB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20040217         | US20010922406                                    | 20010803         |
|                                         | WO0213400 A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20020214         | WO2001US24630                                    | 20010803         |
|                                         | WO0213400 A3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20020411         | WO2001US24630                                    | 20010803         |
| Probable Assignee:                      | INTEL CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                  |                  |
| Assignee(s):(std):                      | INFINEON TECHNOLOGIES AG ; MORPHICS TECH INC ; INTEL MOBILE COMM GMBH                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |                                                  |                  |
| Assignee(s):                            | BALASUBRAMONIAN VENUGOPAL ; GOSLIN GREGORY R ; MORPHICS TECHNOLOGY INC ; INTEL MOBILE COMMUNICATIONS TECHNOLOGY GMBH ; INTEL MOBILE COMMUNICATIONS GMBH ; INTEL DEUTSCHLAND GMBH ; INTEL CORP                                                                                                                                                                                                                                                                                                                                                   |                  |                                                  |                  |
| Inventor(s):(std):                      | GOSLIN GREGORY R ; BALASUBRAMONIAN VENUGOPAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                                  |                  |
| Inventor(s):                            | BALASUBRAMONIAN VENUGOPAL CAMPBELL ; GREGORY R GOSLIN ; VENUGOPAL BALASUBRAMONIAN ; GOSLIN GREGORY R LOS GATOS                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |                                                  |                  |
| Agent(s):                               | 2SPL PATENTANWALTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                                                  |                  |
| Designated states:                      | AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW                                                                                                                                                                                                       |                  |                                                  |                  |
| International class (IPC 8-9):          | H04B1/69 H04B1/707 H04B1/7075 H04B1/7077 (Advanced/Invention)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                  |                                                  |                  |
| International class (IPC 1-7):          | G06F17/50 H04B1/69                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                                                  |                  |
| CPC:                                    | H04B1/7077 H04B1/707 H04B1/70751 H04B2201/70701 H04B2201/70707 H04J3/0611                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                                  |                  |
| European class:                         | H04B1/707 H04B1/7075A H04B1/7077 T04B1/707G T04B1/707R T04B201/707G T04B201/707R T04J3/06A1B                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                                  |                  |
| US class:                               | 375/E01.007 375/E01.01 375/E1.007 375/E1.01 375/E10.07S 375/E10.10S 716/1 716/136 716/136P 716/4                                                                                                                                                                                                                                                                                                                                                                                                                                                |                  |                                                  |                  |
| <a href="#">Classification Explorer</a> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                                  |                  |
| Cited documents:                        | WO0014893 A1, US6389000 BA, US5894517 A, US5748687 A, US5550811 A, US5353301 A, US5341395 A, US5257282 A, US2001048714 AA,                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                  |                  |
| Forward Citations:                      | WO10036587, WO05057822, USRE45466, US9898611, US8892974, US8565008, US8433023, US8181092, US7954031, US7898972, US7889593, US7729382, US7680156, US7657813, US7577184, US7461286, US7418071, US7415404, US7327717, US7313104, US7234070, US7218628, US7168027, US7159092, US7149213, US7137024, US7016451, US2010106997, US2008301533, US2008195908, US2008126059, US2007047538, US2006206742, US2006133456, US2005286505, US2005094584, US2005091464, US2003147374, US2003133439, US2002163986, RU2602048, EP2338314, DE10210236, CN105226054, |                  |                                                  |                  |



Title:

METHOD AND APPARATUS FOR DATA INTERPRETATION

Priority:

US20000184757P 20000224      US20010793004 20010226

Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2002014531 AA    | 20020207         | US20010793004      | 20010226         |
| US6698657 BB       | 20040302         | US20010793004      | 20010226         |

Probable Assignee:

DRUCKER STEVEN J

Assignee(s):(std):

DRUCKER STEVEN J ; DUNLAP JOHN T ; MURPHY VICTOR A

Inventor(s):(std):

MURPHY VICTOR A ; DUNLAP JOHN T ; DRUCKER STEVEN J

International class (IPC 8-9):

G06K7/14 (Advanced/Invention);  
G06K19/06 (Advanced/Non-invention);  
G06K7/14 (Core/Invention);  
G06K19/06 (Core/Non-invention)

International class (IPC 1-7):

G06K19/06 G06K7/10

CPC:

G06K7/14 G06K2019/06243

European class:

G06K7/14 S06K19/06W6

US class:

219/506 219/678 219/679 219/721 219/749 235/462.03

Classification Explorer

Cited documents:

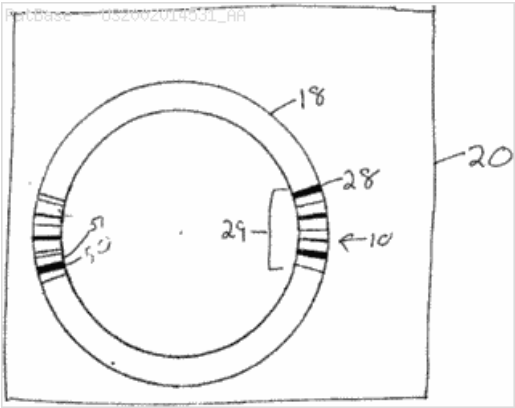
US6382514 BA, US6124583 A, US5994683 A, US5798514 A, US5724244 A, US5486685 A, US5426280 A, US5395181 A, US5321232 A, US5285041 A, US4983815 A, US4945216 A, US4816635 A, US4780588 A, US4714811 A, US4323773 A, JP2000104927 A2,

Forward Citations:

WO07017767, WO07017767, USD520375, US9811704, US9582699, US9268984, US8191465, US7920208, US7205774, US2016309951, US2016232390, US2013064929, US2009259115, US2009039158, US2008236562, US2007221729, US2007035662, US2006137597, US2006125491, CN105592761, CN103945739, CN103945739,

Abstract:

An interactive interpreter of synchronous or asynchronous selective data from an annular indicia. The annular indicia has data contained thereon that is formatted into bit-cells. The bit-cells are angularly positioned about the circumference of the annular indicia. The annular indicia may, if desired, be rotated in the clockwise or counterclockwise direction enabling the interpretation of data encoded as bit-cells. A controller with memory, the memory having stored therein a software program that provides interpretation of the data contained on the annular indicia and the directional rotation of the data. The rotation of the annular indicia may, if desired, be started and stopped at any convenient time without loss of data or reinterpreting of data. The data contained on the annular indicia may, if desired, be selectively disposed about the circumference of the annual indicia.



**Title:** READER OF CODE FROM SURFACE OF BODIES OF ROTATION

**Priority:** RU20000112157 20000515

**Family:**

| Publication number                                                                               | Publication date | Application number | Application date |
|--------------------------------------------------------------------------------------------------|------------------|--------------------|------------------|
|  RU2000112157 A | 20020310         | RU20000112157      | 20000515         |
|  RU2183030 C2   | 20020527         | RU20000112157      | 20000515         |

**Probable Assignee:** KTI NAUCHNOG

**Assignee(s):(std):** KTI NAUCHNOG ; O PRIBOROSTROENIJA SO RAN ; PRIBOROSTROENIJA SO RAN O

**Assignee(s):** KONSTRUKTORSKO-TEKHNOLOGICHESKIJ INSTITUT NAUCHNOGO PRIBOROSTROENIJA SO RAN

**Inventor(s):(std):** FINOGENOV L V ; FINOGENOV LV ; KASTORSKIJ L B ; KASTORSKIJ LB ; KIR JANOV V P ; KIR JANOV VP ; OBIDIN JU V ; OBIDIN JUV

**Inventor(s):** KIR'JANOV V.P.

**International class (IPC 8-9):** G02B27/00 G02B27/14 G06K7/10 (Advanced/Invention); G02B27/00 G02B27/14 G06K7/10 (Core/Invention)

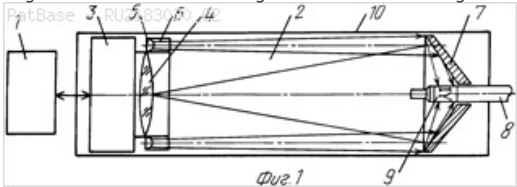
**International class (IPC 1-7):** G02B27/00 G02B27/14 G06K7/10

[Classification Explorer](#)

**Forward Citations:** RU2602048,

**Abstract:**

FIELD: optoelectronics technology, identification of products marked by bar, alphabetic-digital or graphical symbols. SUBSTANCE: reader of code from surface of bodies of rotation has unit processing videosegment and optical unit connected to it that incorporates multielement matrix photodetector, lens, illumination elements and conical mirror placed in sequence on optical axis. Illumination elements are arranged uniformly over circumference in symmetry with optical axis of ring collimator, outside field of vision of lens. Conical mirror has through hole in center for entry of article with code and reflection surface of mirror is directed towards lens and is located around surface with code. EFFECT: potential for reading information in the form of alphabetic-digital and Greek symbols in addition to bar codes achieved thanks to generation and recording of two-dimensional image of read code. 4 dwg



Title:

Priority:

Family:

Encoded coffee packet

US20000238802P 20001006

US20010972790 20011005

WO2001US31348 20011005

Publication number

Publication date

Application number

Application date

AU200211489 A1

20020415

AU20020011489

20011005

AU200211489 A5

20020415

AU20020011489

20011005

AU2002211489 AA

20020415

AU20020211489

20011005

US2002048621 AA

20020425

US20010972790

20011005

WO0228241 A1

20020411

WO2001US31348

20011005

Probable Assignee:

Assignee(s):(std):

Assignee(s):

Inventor(s):(std):

Inventor(s):

Designated states:

FARMER BROS CO

BOYD COFFEE CO

BOYD COFFEE COMPANY ; BOYD DAVID D ; FARMER BROS CO ; JOHNSON MICHAEL W ; BOYD ASSETS CO

BOYD DAVID D ; JOHNSON MICHAEL W

MICHAEL W JOHNSON ; DAVID D BOYD

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

International class (IPC 8-9):

International class (IPC 1-7):

CPC:

European class:

US class:

A47J31/36 B65D81/00 B65D85/804 (Advanced/Invention)

A47J31/00 B65B29/02 B65B55/00

A47J31/3623 A47J31/4492 B65D85/8046 B65D2203/00 B65D2203/06

A47J31/06C A47J31/36A4 A47J31/40B A47J31/40H A47J31/44H B65D81/00B3 B65D85/804B1 L65D203/00 L65D203/06

426/232 426/232S 426/77 426/77P 426/84 426/84S

Classification Explorer

Cited documents:

Forward Citations:

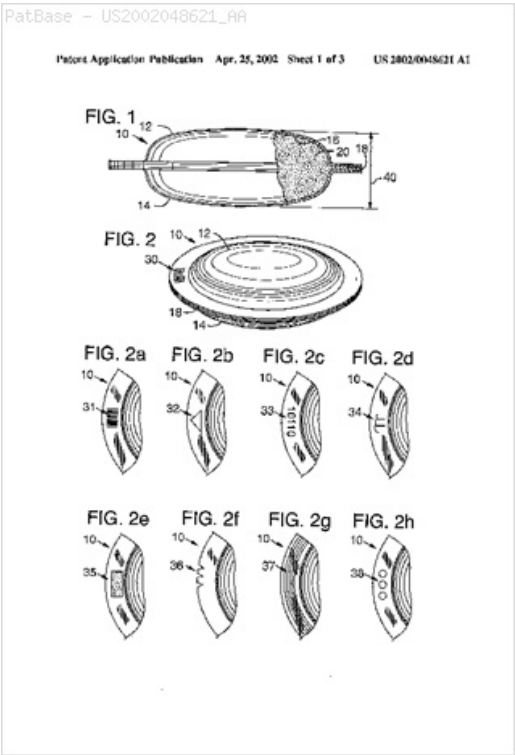
US5974950 A, US5798037 A,

WO17178281, WO17074208, WO17074207, WO16015125, WO15049238, WO14096949, WO14029628, WO13098173, WO13080073, WO13046149, WO13039955, WO13037783, WO13037782, WO13037781, WO12104301, WO12062842, WO12010317, WO12000878, WO11141535, WO11141532, WO11089049, WO11089048, WO11076750, WO11067232, WO11067227, WO11067191, WO11067188, WO11067157, WO11067156, WO11029813, WO11000725, WO11000724, WO10076264, WO10076263, WO08155229, WO08090122, WO08090122, WO07122144, WO07087890, WO07072413, WO07072413, WO06103308, WO06103308, WO06057022, WO06032565, WO06032564, WO05122851, WO05077811, WO05077811, WO05044067, WO04064585, WO0235320, WO0235320, USD764270, USD753480, USD743786, USD743252, USD703039, USD695111, USD694620, USD621698, USD506926, US9999323, US9999316, US9994388, US9980596, US9932168, US9919864, US9918585, US9907432, US9828153, US9815617, US9801495, US9801494, US9770129, US9743802, US9730547, US9723944, US9714136, US9708109, US9676538, US9675203, US9668606, US9668604, US9615597, US9585511, US9582699, US9545171, US9538877, US9538876, US9516970, US9487348, US9481508, US9468230, US9463921, US9451847, US9445688, US9386877, US9320385, US9320382, US9282848, US9272827, US9271597, US9268984, US9260284, US9232872, US9232871, US9198533, US9149151, US9149150, US9149149, US9138096, US9113654, US9101243, US9101163, US9084509, US9027466, US9010237, US8993018, US8974846, US8960075, US8950317, US8905068, US8887622, US8857317, US8852659, US8784915, US8771768, US8740020, US8722124, US8613248, US8590753, US8567304, US8499975, US8459179, US8297308, US8168247, US8103542, US8087347, US8071147, US8033211, US7921766, US7910145, US7890209, US7856920, US7846485, US7798054, US7673558, US7640843, US7607385, US7592027, US7533604, US7533603, US7513412, US7506576, US7461584, US7444925, US7418899, US7387239, US7340990, US7328651, US7322277, US7318372, US7316178, US7308851, US7287461, US7258061, US7255039, US7243598, US7231869, US7219598, US7213506, US7197377, US7111168, US7097074, US7032818, US6994879, US6931984, US2017174419, US2017174417, US2017020328, US2017011246, US2016302612, US2016280454, US2016206135, US2016104258, US2016045060, US2015257586, US2015157169, US2015135964, US2015135962, US2015132449, US2015059588, US2015017288, US2014224130, US2013312619, US2013129876, US2013129872, US2013064937, US2013064929, US2013014648, US2013011521, US2012295234, US2012276264, US2012207896, US2012207895, US2012189742, US2012171334, US2012100264, US2012097041, US2012070544, US2012055342, US2011308397, US20111262601, US2011166910, US2011113968, US2011070348, US2010326283, US2010247714, US2010219237, US2010132564, US2010107887, US2010078446, US2010055252, US2009181143, US2009173642, US2009159140, US2008302251, US2008299262, US2008148948, US2008081089, US2007289453, US2007172552, US2006108415, US2005247206, US2005150391, US2005103204, US2005066819, US2005034604, US2004211322, US2004206245, US2004197444, US2004191372, US2004191371, US2004191370, US2004188459, US2004187696, US2004187695, US2004182251, US2004182250, US2004180123, US2004180119, US2004177765, US2004177764, US2004173102, US2004103792, US2004089158, US2003006281, US2001037313, US10078934, US10076208, US10070751, US10004353, US10004248, US09999323, US09999316, TWI352585, RU2656195, RU2614092, NL1026437, KR101175965, KR101073804, JP6285534, JP6002333, JP5881699, JP5789658, JP5785610, JP5015952, JP2017148511, JP2016521146, JP2016502438, JP2016163691, JP2015501964, JP2015057105, JP2014533598, JP2014528270, JP2013532498, JP2013530798, JP2013526317, JP2013526316, JP2012513785, JP2012513784, JP2010516364, JP2009520552, JP2007532432, GB2509081, GB2509081, GB2411105, GB2411105, GB2409965, GB2409965, GB2403892, GB2403892, GB2397510, GB2397509, GB2397509, FR2956865, FR2917723, FR2912124, FR2900395, FR2874210, FR2874164, FR2850957, ES2239919, EP3190067, EP3023363, EP3023362, EP3023362, EP2992792, EP2957525, EP2752373, EP2686322, EP2572609, EP2481330, EP2345352, EP2345351, EP2266446, EP2223869, EP2218653, EP2218652, EP1974638, EP1950150, EP1795094, EP1791770, EP1786303, EP1716069, EP1629752, EP1593329, EP1586534, EP1551238, EP1510160, EP1440640, DE102012017199, CN105996782, CN105744867, CN105188491, CN105188491, CN105078250, CN105078250, CN104955364, CN104799696, CN104777780, CN104777780, CN104528181, CN103826510, CN103826510, CN103596474, CN103596474, CN103476686, CN103476686, CN103221320, CN102947198, CN102939253, CN102939253, CN102711566, CN102665501, CN102665501, CN102639038, CN102470978, CN102470977, CN102264266, CN102264266, AU2014234313, AU2014202783, AU2013366003, AU2012308783, AU2012213479, AU2011251955, AU2011251952,

Abstract:

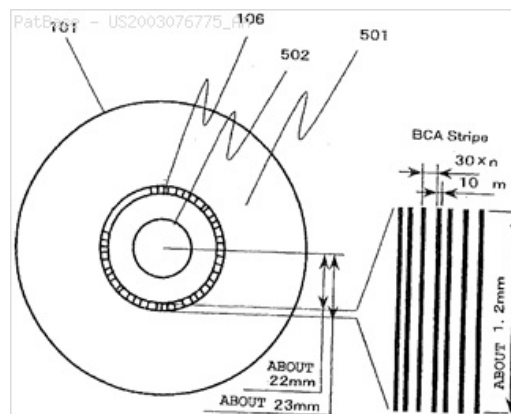
A brewing packet is provided for use in the preparation of hot or cold beverages. The brewing packet envelops a brewing

ingredient chosen according to the tastes of a beverage drinker. The packet includes a machine interpretable feature that contains encoded data capable of being read by a beverage producing device. Furthermore, the data on the packet is capable of directing the beverage producing device to employ a specific brewing operation suited for the particular brewing packet. This allows for producing the optimal beverage from the brewing ingredient. The packet may be utilized with a variety of brewing ingredients to produce a variety of beverages. Similarly, the packet may be configured to produce single or multiple servings of a beverage.



| <b>Title:</b>                                                                     | OPTICAL RECORDING MEDIUM, OPTICAL RECORDING MEDIUM PRODUCTION METHOD, OPTICAL RECORDING MEDIUM PRODUCTION APPARATUS, PROGRAM, AND MEDIUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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                                                   |                |          |               |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |               |          |               |          |                                                                                   |               |          |               |          |                                                                                   |             |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |             |          |               |          |                                                                                   |                 |          |                |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |               |          |               |          |
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| <b>Priority:</b>                                                                  | JP20000337091 20001106<br>KR20027008764 20020706<br>US20070755336 20070530                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | JP20010240832 20010808<br>WO2001JP09650 20020706 | WO2001JP09650 20011102<br>US20020169462 20021023 |                  |  |                    |                  |                    |                  |                                                                                   |                |          |               |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |               |          |               |          |                                                                                   |               |          |               |          |                                                                                   |             |          |               |          |                                                                                   |              |          |               |          |                                                                  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| <b>Family:</b>                                                                    | <table><tr><th></th><th>Publication number</th><th>Publication date</th><th>Application number</th><th>Application date</th></tr><tr><td></td><td>AU200214264 A1</td><td>20020515</td><td>AU20020014264</td><td>20011102</td></tr><tr><td></td><td>AU200214264 A5</td><td>20020515</td><td>AU20020014264</td><td>20011102</td></tr><tr><td></td><td>AU2002214264 AA</td><td>20020515</td><td>AU20020214264</td><td>20011102</td></tr><tr><td></td><td>BRPI0107435 A</td><td>20021008</td><td>BR2001PI07435</td><td>20011102</td></tr><tr><td></td><td>CN100437773 C</td><td>20081126</td><td>CN20018003539</td><td>20011102</td></tr><tr><td></td><td>CN1394332 A</td><td>20030129</td><td>CN20018003539</td><td>20011102</td></tr><tr><td></td><td>EP1343153 A1</td><td>20030910</td><td>EP20010982735</td><td>20011102</td></tr><tr><td></td><td>EP1343153 A4</td><td>20050413</td><td>EP20010982735</td><td>20011102</td></tr><tr><td></td><td>EP1343153 B1</td><td>20110420</td><td>EP20010982735</td><td>20011102</td></tr><tr><td></td><td>HK1051599 A1</td><td>20090717</td><td>HK20030103862</td><td>20030530</td></tr><tr><td></td><td>HK1051599 B</td><td>20090717</td><td>HK20030103862</td><td>20030530</td></tr><tr><td></td><td>JP2002037483 A1</td><td>20040311</td><td>JP20020540149T</td><td>20011102</td></tr><tr><td></td><td>KR100809788 B1</td><td>20080304</td><td>KR20027008764</td><td>20011102</td></tr><tr><td></td><td>KR20020071923 A</td><td>20020913</td><td>KR20027008764</td><td>20011102</td></tr><tr><td></td><td>US2003076775 AA</td><td>20030424</td><td>US20020169462</td><td>20021023</td></tr><tr><td></td><td>US2007223354 AA</td><td>20070927</td><td>US20070755336</td><td>20070530</td></tr><tr><td></td><td>US7239601 BB</td><td>20070703</td><td>US20020169462</td><td>20021023</td></tr><tr><td></td><td>WO0237483 A1</td><td>20020510</td><td>WO2001JP09650</td><td>20011102</td></tr><tr><td></td><td>WO0237483 B1</td><td>20020704</td><td>WO2001JP09650</td><td>20011102</td></tr><tr><td></td><td>ZA200204797 A</td><td>20030225</td><td>ZA20020004797</td><td>20020614</td></tr></table> |                                                  |                                                  |                  |  | Publication number | Publication date | Application number | Application date |  | AU200214264 A1 | 20020515 | AU20020014264 | 20011102 |  | AU200214264 A5 | 20020515 | AU20020014264 | 20011102 |  | AU2002214264 AA | 20020515 | AU20020214264 | 20011102 |  | BRPI0107435 A | 20021008 | BR2001PI07435 | 20011102 |  | CN100437773 C | 20081126 | CN20018003539 | 20011102 |  | CN1394332 A | 20030129 | CN20018003539 | 20011102 |  | EP1343153 A1 | 20030910 | EP20010982735 | 20011102 |  | EP1343153 A4 | 20050413 | EP20010982735 | 20011102 |  | EP1343153 B1 | 20110420 | EP20010982735 | 20011102 |  | HK1051599 A1 | 20090717 | HK20030103862 | 20030530 |  | HK1051599 B | 20090717 | HK20030103862 | 20030530 |  | JP2002037483 A1 | 20040311 | JP20020540149T | 20011102 |  | KR100809788 B1 | 20080304 | KR20027008764 | 20011102 |  | KR20020071923 A | 20020913 | KR20027008764 | 20011102 |  | US2003076775 AA | 20030424 | US20020169462 | 20021023 |  | US2007223354 AA | 20070927 | US20070755336 | 20070530 |  | US7239601 BB | 20070703 | US20020169462 | 20021023 |  | WO0237483 A1 | 20020510 | WO2001JP09650 | 20011102 |  | WO0237483 B1 | 20020704 | WO2001JP09650 | 20011102 |  | ZA200204797 A | 20030225 | ZA20020004797 | 20020614 |
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|  | AU200214264 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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|  | AU200214264 A5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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|  | AU2002214264 AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|  | BRPI0107435 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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|  | CN100437773 C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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|  | CN1394332 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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|  | EP1343153 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | EP1343153 A4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | EP1343153 B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | HK1051599 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | HK1051599 B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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|  | JP2002037483 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|  | KR100809788 B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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|  | KR20020071923 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|  | US2003076775 AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|  | US2007223354 AA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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|  | US7239601 BB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | WO0237483 A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | WO0237483 B1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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|  | ZA200204797 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| <b>Probable Assignee:</b>                                                         | PANASONIC CORP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| <b>Assignee(s):(std):</b>                                                         | MATSUSHITA ELECTRIC INDUSTRIAL CO LTD ; MATSUSHITA ELECTRIC IND CO LTD ; NISHIUCHI KENICHI ; PANASONIC CORP ; SATO SHUJI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| <b>Assignee(s):</b>                                                               | MATSUSHITA ELECTRIC INDUSTRIAL CO ; MATSUSHITA ELECTRICAL CO ; MATSUSHITA ELECTRICAL CO LTD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| <b>Inventor(s):(std):</b>                                                         | KENICH NISHIUCHI ; KENICHI NISHIUCHI ; SATO SHUJI ; NISHIUCHI KENICHI ; SHUJI SATO ; NISHIUCHI KENICH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| <b>Agent(s):</b>                                                                  | GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIETAET; SHANGHAI PATENT AND TRADEMARK OFFICE; RATNERPRESTIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| <b>Designated states:</b>                                                         | AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| <b>International class (IPC 8-9):</b>                                             | G11B G11B20/00 G11B7/007 G11B7/24 G11B7/24038 G11B7/26 (Advanced/Invention);<br>G11B7/007 G11B7/24 G11B7/24038 (Advanced/Non-invention);<br>G11B20/00 G11B7/007 G11B7/24 G11B7/26 (Core/Invention);<br>G11B7/24 (Core/Non-invention);<br>G11B (Subclass/Invention)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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| <b>International class (IPC 1-7):</b>                                             | G11B G11B7/007 G11B7/24 G11B7/26 G11B7/7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| <b>CPC:</b>                                                                       | Y10T428/21 G11B7/26 G11B7/00736 G11B7/24038 G11B20/00086 G11B20/00094                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |               |          |               |          |
| <b>European class:</b>                                                            | G11B20/00P G11B20/00P1 G11B7/007 G11B7/007R G11B7/26 S11B7/24038                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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                                                   |                |          |               |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |               |          |               |          |                                                                                   |               |          |               |          |                                                                                   |             |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |             |          |               |          |                                                                                   |                 |          |                |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                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| <b>US class:</b>                                                                  | 369/275.1 369/275.3 369/275.300P 369/283 369/283S 369/286 369/52.1 369/52.100S 369/94 428/64.1 G9B/007.033 G9B/007.194 G9B/020.002 G9B/20.002 G9B/20.002S G9B/7.033 G9B/7.033S G9B/7.194 G9B/7.194S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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                 |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |             |          |               |          |                                                                                   |                 |          |                |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |               |          |               |          |
| <a href="#">Classification Explorer</a>                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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                 |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |             |          |               |          |                                                                                   |                 |          |                |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                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| <b>Cited documents:</b>                                                           | WO9858368 A1, WO0173784 A1, WO0023990 A1, US6885629 BB, US6661768 BA, US6519213 BA, US6414920 BA, US6295262 BA, US6052465 A, US6034937 A, US5818812 A, US5761301 A, US5661800 A, US5484686 A, US5430281 A, US3745065 A, US2002067674 AA, KR20000023405 A, JP8255347 A2, JP8147762 A2, JP6203412 A2, JP3157816 A2, JP2000076705 A2, JP2000011453 A2, JP10289486 A2, EP1282125 A1, EP1124221 A1, EP0807929 A1, EP0741382 A1, EP0713217 A2, CN1039920 A,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| <b>Forward Citations:</b>                                                         | WO08089129, WO07040038, WO06004089, WO06004088, WO05057567, WO05057567, WO05057567, WO04093066, WO04042711, US9811704, US9582699, US9268984, US8717858, US8355308, US8310907, US8190709, US8179758, US8159922, US8155427, US8116193, US8031582, US8023394, US8014259, US8009547, US7948860, US7903535, US7898917, US7872955, US7830779, US7821909, US7817514, US7813246, US7808881, US7719934, US7701819, US7701817, US7697384, US7684292, US7680012, US7652960, US7639584, US7630280, US7616552, US7599273, US7596064, US7590031, US7577074, US7564760, US7505392, US7496938, US7414924, US7376070, US7369472, US7362691, US7218589, US7175086, US2016232390, US2010095061, US2009141604, US2009025021, US2008239919, US2008219142, US2008170775, US2008151731, US2008151713, US2008123505, US2008112283, US2008107003, US2008107002, US2008107001, US2008106993, US2008101207, US2008095034, US2008095033, US2008095023, US2008094995, US2008094985, US2008094984, US2008094983, US2008094957, US2008094956, US2008080350, US2008080338, US2008072245, US2008068961, US2008062835, US2008043590, US2008043588, US2007298207, US2007280095, US2007268801, US2007268798, US2007263525, US2007247987, US2007247986, US2007165502, US2007127352, US2007036053, US2007030779, US2007025234, US2007025212, US2006271942, US2006233059, US2006221791, US2006221790, US2006215512, US2006114807, US2006114806, US2006092824, US2006083155, US2006041898, US2005169158, US2005163026, US2005122888, US2005122887, US2005111342, US2005078594, US2005007920, US2005007917, US2005007853, US2004264360, US2004085877, US2004006607, TWI357073, TWI355651, TWI353603, KR101032325, KR100805177, KR100722752, JP5241251, JP4439521, JP2009217891, JP2009176335, JP2009064556, JP2008243299, JP2008204576, JP2008097825, JP2006004088, EP2469513, EP2469513, EP2244257, EP2242050, EP2146347, EP1884937, EP1884936, EP1748431, EP1729293, EP1690155, EP1662496, EP1662495, EP1643495, EP1542211, EP1542211, EP1524652,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| <b>Abstract:</b>                                                                  | There are some cases that an accuracy is low for reading unique information identifying an individual from an optical disk which                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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                 |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |             |          |               |          |                                                                                   |                 |          |                |          |                                                                                   |                |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |                 |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |              |          |               |          |                                                                                   |               |          |               |          |

comprises a plurality of information layers. The optical disk according to the present invention is an optical disk which comprises a first information layer 102 and a second information layer 104 for holding information so that by means of incident light, (1) the information will be reproduced or (2) the information will be recorded and reproduced, and which comprises a BCA area which is formed in the first information layer 102 and in which individual identification information 106 uniquely given to the optical disk is recorded.



Title:

MACHINE-READABLE IDENTIFIER ON A PORTION PACKAGE, WHICH CONTAINS GROUND COFFEE, FOR ESPRESSO MACHINES

Priority:

DE20011016239 20010331 DE20012021494U 20010331 DE20025005947 20020320 WO2002EP03282 20020320

Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR033451 AA        | 20031217         | AR2002P101102      | 20020326         |
| AT318535 E         | 20060315         | AT20020735168T     | 20020320         |
| AU2002310978 AA    | 20021015         | AU20020310978      | 20020320         |
| AU2002310978 BB    | 20080703         | AU20020310978      | 20020320         |
| CA2442389 AA       | 20030929         | CA20022442389      | 20020320         |
| CA2442389 C        | 20100126         | CA20022442389      | 20020320         |
| CL2002000583 A1    | 20030109         | CL20020000583      | 20020326         |
| CL48815 B          | 20121119         | CL20020000583      | 20020326         |
| DE10116239 A1      | 20021017         | DE20011016239      | 20010331         |
| DE20121494 U1      | 20021017         | DE20012021494U     | 20010331         |
| DE50205947 D1      | 20060427         | DE20025005947      | 20020320         |
| EP1379153 A1       | 20040114         | EP20020735168      | 20020320         |
| EP1379153 B1       | 20060301         | EP20020735168      | 20020320         |
| ES2254687 T3       | 20060616         | ES20020735168T     | 20020320         |
| IL157902 A0        | 20040328         | IL20020157902      | 20020320         |
| IL157902 A1        | 20091224         | IL20020157902      | 20020320         |
| JP2004525829 T2    | 20040826         | JP20020576773T     | 20020320         |
| JP4000061 B2       | 20071031         | JP20020576773T     | 20020320         |
| MY140515 A         | 20091231         | MY20020001158      | 20020329         |
| MY163036 A         | 20170731         | MY20080000491      | 20020329         |
| NO20034325 A       | 20031105         | NO20030004325      | 20030926         |
| NO20034325 A0      | 20030926         | NO20030004325      | 20030926         |
| NO325538 B1        | 20080609         | NO20030004325      | 20030926         |
| TWI222603 B        | 20041021         | TW20020105441      | 20020321         |
| US2004089158 AA    | 20040513         | US20030473397      | 20030930         |
| US7444925 BB       | 20081104         | US20030473397      | 20030930         |
| WO02078498 A1      | 20021010         | WO2002EP03282      | 20020320         |
| ZA200307553 A      | 20040831         | ZA20030007553      | 20030929         |

Probable Assignee:

EUGSTER FRISMAG AG

Assignee(s):(std):

EUGSTER FRISMAG AG ; EUGSTER FRISMAG AG ROMANSHORN ; EUGSTER FRISMAG ROMANSHORN AG ; GOTTHARD MAHLICH ; MAHLICH GOTTHARD ; MAHLICH GOTTHARD DIPL ING

Assignee(s):

EUGSTER/FRISMAG AG ; EUGSTER AND FRISMAG AG

Inventor(s):(std):

GOTTHARD MAHLICH ; MAHLICH GOTTHARD

Agent(s):

GRIFFITH HACK; FETHERSTONHAUGH AND CO; JOHANSSON; SANFORD TCOLB AND CO; VENABLE LLP; KINBERG ROBERT; VOORHEES CATHERINE M; CATHERINE M; ROBERT

Designated states:

AE AM AT AU AZ BE BF BJ BR BY CA CF CG CH CI CM CN CY CZ DE DK ES FI FR GA GB GH GM GN GQ GR GW HU ID IE IL IT JP KE KG KZ LI LS LU MA MC MD ML MR MW MX MZ NE NL NO PH PL PT RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TZ UA UG US ZA ZM ZW

International class (IPC 8-9):

A47J31/00 A47J31/06 A47J31/36 A47J31/40 B65D77/00 B65D77/22 B65D81/00 B65D85/804 G06K19/06 G06K7/10 G07F13/00 G07F13/10 (Advanced/Invention); A47J31/00 A47J31/44 (Advanced/Non-invention); A47J31/06 A47J31/24 A47J31/40 B65D77/00 B65D77/22 B65D81/00 B65D85/804 G06K19/06 G06K7/10 G07F13/00 G07F13/10 (Core/Invention); A47J31/00 A47J31/44 (Core/Non-invention)

International class (IPC 1-7):

A23L1/00 A47J31/06 A47J31/40 B65D77/00 B65D77/22 G06K1/12 G06K19/06 G06K7/10 G07F13/00 G07F13/10

CPC:

A47J31/3623 A47J31/3642 A47J31/4492 B65D85/8043 B65D85/8046 B65D2203/00 G06K7/1421 G06K19/06168

European class:

A47J31/36A4 A47J31/36A4H A47J31/40B A47J31/40B2 A47J31/40H A47J31/44H B65D81/00B3 B65D85/804B B65D85/804B1 G06K19/06C5Y G06K7/14A2E L65D203/00

US class:

99/275 99/275P 99/289.00P 99/289P 99/289R 99/295

[Classification Explorer](#)

Cited documents:

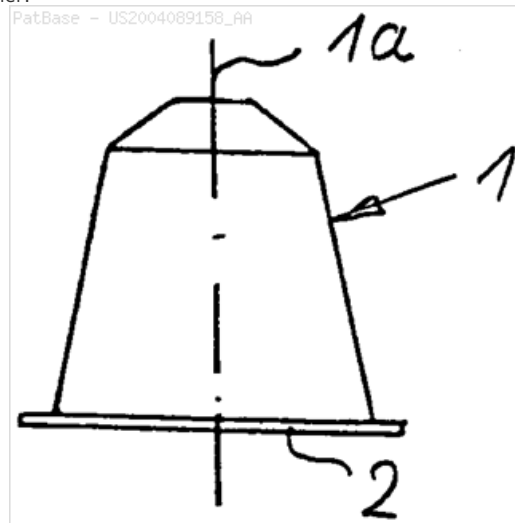
US5974950 A, US5855161 A, US5158793 A, US4829889 A, US4230266 A, US2002048621 AA, JP4096192 A2, JP2001250161 A2, JP2000262405 A2, FR2625348 A1, EP1046366 A1, EP0972481 A1, DE4312093 A1, CH588958, CH558958 A,

Forward Citations:

WO17074208, WO17074207, WO16091861, WO16091860, WO16091859, WO15021557, WO14202694, WO14096405, WO14096082, WO14037474, WO14037473, WO14001566, WO14001516, WO13143923, WO13117884, WO13072297, WO12010317, WO11154203, WO11141535, WO11141532, WO11089049, WO11089048, WO11000725, WO11000445, WO07080532, WO05079639, WO05079639, WO05079638, WO05063091, WO05044067, WO05018395, WO05003022, USD757536, USD743786, USD743252, USD708057, USD703039, USD697797, USD695111, USD694620, USD539643, US9994388, US9980596, US9932168, US9919864, US9907432, US9907425, US9834370, US9828153, US9773202, US9730547, US9723944, US9451847, US9433317, US9428329, US9428328, US9386877, US9336479, US9320385, US9113654, US9101243, US9101163, US9084509, US9062912, US9027466, US8993018, US8974846, US8950317, US8887622, US8852659, US8814000, US8771768, US8567304, US8434642, US8168247, US8162176, US8161866, US7890209, US7685930, US7607385, US7197377, US6931984, US2017020328, US2015257586, US2015140184, US2015068404, US2013312619, US2013129872, US2013064937, US2013014648, US2012295234, US2011070348, US2010107887, US2008302251, US2007196402, US2005247206, US10070751, US10046959, KR101224733, JP2017505147, JP2015530882, JP2013530798, JP2013517028, JP2013517027, JP2009534143, JP2007525385, JP2007522856, JP2004283566, FR2956865, EP3031750, EP3031749, EP3031748, EP3023363, EP3023362, EP3023361, EP2957525, EP2952453, EP2580142, EP2475291, EP2446791, EP2345352, EP2345351, EP2223869, EP2218653, EP2218652, EP1813333, EP1764015, EP1554958, EP1551238, EP1500358, EP1447034, EP1440640, DE202009008984, DE102013202677, DE102012105791, CN107207153, CN107108114, CN107108113, CN104736020, CN104602576, CN104411601, CN102939252, CN102939252, CH707374, AU2014283278, AU2014283278, AU2013283201,

**Abstract:**

A machine readable identification on a single-serving unit containing coffee powder for espresso machines, designed so that it can be read easily and accurately, is structured in a rotation-symmetrical manner and is applied to an essentially level surface of the single-serving unit, whereby the single-serving unit preferably consists of a single-serving capsule (1) having an essentially circular base (2) whereupon the identification is applied in a coaxial manner.

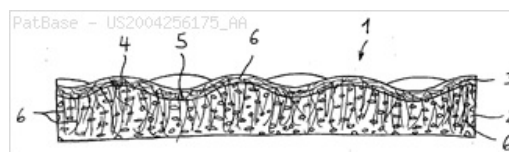


**Title:** MULTI-PLY SOUND-PROOFING AND THERMAL INSULATION PART**Priority:** DE20022013228U 20020823 WO2003EP06825 20030627

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AU2003249892 AA    | 20040329         | AU20030249892      | 20030627         |
|         | CN1610611 A        | 20050427         | CN20038001795      | 20030627         |
|         | DE20213228 U1      | 20021031         | DE20022013228U     | 20020823         |
|         | EP1534505 A1       | 20050601         | EP20030793613      | 20030627         |
|         | JP2005536663 T2    | 20051202         | JP20040533244T     | 20030627         |
|         | MXPA04003895 A1    | 20040716         | MX2004PA03895      | 20040423         |
|         | US2004256175 AA    | 20041223         | US20040494979      | 20040507         |
|         | WO04022329 A1      | 20040318         | WO2003EP06825      | 20030627         |

**Probable Assignee:** CARCOUSTICS TECH CENTER GMBH**Assignee(s):(std):** CAKUSTIX TECHNOLOGY CT CO LTD ; CARCOUSTICS TECH CT GMBH ; CARCOUSTICS TECH CT GMBH AND CO ; GNAEDIG CHRISTIAN ; GNADIG CHRISTIAN**Assignee(s):** CARCOUSTICS TECH CENTER GMBH ; CARCOUSTICS TECH CENTER GMBH AND CO KG ; CARCOUSTICS TECH CENTER GMBH AND CO KG ; CAKUSTIX TECHNOLOGY CENTER CO ; CAKUSTIX TECHNOLOGY CENTER CO LTD**Inventor(s):(std):** GNADIG CHRISTIAN ; GNEDISI CRISTIAN ; GNAEDIG CHRISTIAN**Inventor(s):** CRISTIAN GNEDISI ; CHRISTIAN GN DIG ; CHRISTIAN GNADIG**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class (IPC 8-9):** B32B3/26 B32B5/06 B32B5/24 B60R13/08 D04H1/46 F16L59/02 (Advanced/Invention); B32B3/26 B32B5/06 B32B5/22 B60R13/08 D04H1/46 F16L59/02 (Core/Invention)**International class (IPC 1-7):** B32B3/26 B32B5/06 B32B5/24 B60R13/08 D04H1/46 D04H13/00 D06N7/00 E04B1/82 E04B1/84 E04B2/02 F01N1/00 F16L59/02**CPC:** B32B5/245 B32B2266/0285 B32B2266/06 B32B2307/102 B32B2307/304 B32B2605/003 B32B3/26 B32B5/06 B32B5/24**European class:** B32B3/26 B32B5/06 B32B5/24**US class:** 181/204 181/290 181/294[Classification Explorer](#)**Cited documents:** WO0034943 A1, US6749929 BA, US6487822 BA, US6174587 BA, US6123172 A, US5160816 A, US4715473 A, US4283457 A, US4097633 A, DE20105627 U1, DE19821532 A1, DE19637142 A1,**Forward Citations:** US9623627, US9611771, US9582699, US9268984, US8840987, US7757809, US2016096424, US2015218985, US2015129355, US2013129998, US2010019416, US2008099278, US2008067002, US2006021823, US2005279574, JP2011197672, GB2416737, GB2416737, EP1944197, DE102014116355, DE102014116354, DE102010047105,**Abstract:**

The invention relates to a multilayered acoustic and thermal insulation part (1), in particular for motor vehicles, with at least one three-dimensionally structured foamed-plastic layer (2) and at least one nonwoven-fabric layer (3) lying adjacent thereto, whereby the foamed-plastic layer has a plurality of protrusions (4) and/or depressions (5). In order to be able to produce such an insulation part cost-effectively with a low weight, provision is made such that the nonwoven-fabric layer (3) is needled onto the foamed-plastic layer (2), and in such a way that the nonwoven-fabric layer lies contour-parallel next to the foamed-plastic layer and the protrusions (4) and/or depressions (5) of the foamed-plastic layer (2) are also impressed in the surface of the nonwoven-fabric layer (3) facing away therefrom. The jointing of the nonwoven-fabric layer and the foamed-plastic layer of the insulation part is thus produced without adhesive, so that costs on adhesive are saved and the weight of the insulation part is correspondingly reduced.



Title:

METHODS AND APPARATUSES FOR ASSURING QUALITY AND SAFETY OF DRUG ADMINISTRATION AND MEDICAL PRODUCTS AND KITS

Priority:

US20010324043P 20010924 EP20020768888 20020924 JP20030530197 20020924  
US20020252818 20020924 JP20100143020 20020924 WO2002US30184 20020924  
US20070716609 20070312

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AU2002331894 AA    | 20030407         | AU20020331894      | 20020924         |
|         | AU2002331894 BB    | 20080522         | AU20020331894      | 20020924         |
|         | CA2461312 AA       | 20040323         | CA20022461312      | 20020924         |
|         | CA2461312 C        | 20151201         | CA20022461312      | 20020924         |
|         | CN100463704 C      | 20090225         | CN20028023311      | 20020924         |
|         | CN1592643 A        | 20050309         | CN20028023311      | 20020924         |
|         | EP1436029 A2       | 20040714         | EP20020768888      | 20020924         |
|         | EP1436029 A4       | 20091230         | EP20020768888      | 20020924         |
|         | EP2369516 A2       | 20110928         | EP20110165184      | 20020924         |
|         | EP2369516 A3       | 20120118         | EP20110165184      | 20020924         |
|         | JP2005503867 T2    | 20050210         | JP20030530197T     | 20020924         |
|         | JP2010246955 A2    | 20101104         | JP20100143020      | 20100623         |
|         | JP2014128673 A2    | 20140710         | JP20130271594      | 20131227         |
|         | JP5904988 B2       | 20160420         | JP20130271594      | 20131227         |
|         | MXPA04002759 A1    | 20050408         | MX2004PA02759      | 20020924         |
|         | US2003074223 AA    | 20030417         | US20020252818      | 20020924         |
|         | US2007213684 AA    | 20070913         | US20070716609      | 20070312         |
|         | WO03026558 A2      | 20030403         | WO2002US30184      | 20020924         |
|         | WO03026558 A3      | 20031218         | WO2002US30184      | 20020924         |

Probable Assignee:

SCOTT LABORATORIES INC

Assignee(s):(std):

SCOTT LAB ; SCOTT LAB INC ; SCOTT LABORATORIES INC

Assignee(s):

SCOTT LABORATORIES ; COBB NICHOLAS EDWARD ; HICKLE RANDALL S

Inventor(s):(std):

COBB NICHOLAS E ; COBB NICHOLAS EDWARD ; HICKLE RANDALL S ; EDWARD COBB NICHOLAS ; NICHOLAS EDWARD COBB

Inventor(s):

COBB NICHOLAS ; RANDALL S HICKLE ; HICKLE RANDALL

Agent(s):

FB RICE; FB RICE PTY LTD; RIDOUT AND MAYBEE LLP; MOZZI MATTEO; SOGA MICHIHARU; HOGAN AND HARTSON LLP, IP GROUP COLUMBIA SQUARE; HOGAN AND HARTSON LLP IP GROUP COLUMBIA SQUARE

Designated states:

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

International class (IPC 8-9):

A61J1/00 A61J1/14 A61J3/00 A61K45/00 A61M11/00 A61M15/00 A61M16/00 A61M31/00 A61M5/00 A61M5/168 A61M5/172 A61P25/04 A61P25/20 G06F19/00 G06K17/00 G06K19/06 G06K19/07 G06Q50/00 G06Q50/22 G06Q50/24 G08B13/14 (Advanced/Invention)

International class (IPC 1-7):

A61J A61J3/00 A61K45/00 A61M11/00 A61M15/00 A61P25/04 A61P25/20 G06F17/60 G06K17/00 G06K19/06 G06K19/07 G08B13/14

CPC:

A61J2205/30 A61J2205/50 A61J1/14 A61J2205/10 A61J2205/60 G06F19/326 G06F19/3418 G06F19/3462 G06Q50/22 G16H10/40 G06F19/00

European class:

A61J1/00C A61J1/14 G06F19/00A G06F19/34L1 G06Q50/22 K61J205/10 K61J205/60 S06F19/32E3 S06F19/34C S06F19/36C

US class:

604/48 604/48S 604/500 604/500P 700/244 700/244S 705/2 705/2P

[Classification Explorer](#)

Cited documents:

WO9965548 A1, WO9962403 A1, WO0162322 A1, WO0158236 A2, WO0114912 A1, WO0003344 A1, US7762795 BB, US7565905 BB, US7096072 BB, US6832200 BB, US6807965 BA, US6745764 BB, US6685678 BB, US6671563 BA, US6264106 BA, US6243480 BA, US6203069 BA, US6202642 BA, US6193510 BA, US6123686 A, US6110152 A, US6019745 A, US5980501 A, US5920054 A, US5882338 A, US5852590 A, US5692640 A, US5692640, US5677290 A, US5651775 A, US5647854 A, US5531698 A, US5531697 A, US5445621 A, US5431627 A, US5378231 A, US5363842 A, US5317506 A, US5207642 A, US5115223 A, US5104374 A, US5078683 A, US5047014 A, US4978335 A, US4976335 A, US4943279 A, US4878896 A, US4850972 A, US4850807 A, US4756706 A, US4755706 A, US4510490 A, US4392849 A, US4280494 A, US4215409 A, US32475999, US20818402, US2010099778 AA, US2006229551 AA, US2006206356 AA, US2006081257 AA, US2006073048 AA, US2005177096 AA, US2005118048 AA, US2004193453 AA, US2003233069 AA, US2003156143 AA, US2003139701 AA, US2002072733 AA, US15125501, JP9511931 T2, JP8212271 A2, JP4309362 A2, JP2003521977 T2, JP2003521977, JP2001505095 T2, JP2001505095, JP10507937 T2, JP10507937, JP10201826, JP10201826,

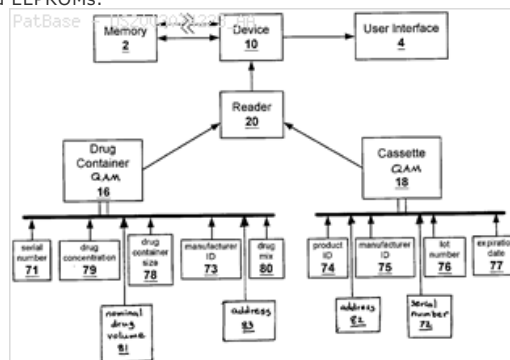
Forward Citations:

WO17048673, WO15076741, WO14121909, WO11089217, WO11041429, WO09107012, WO06086735, WO06086735, WO05111922, WO05089833, WO05084732, USRE43527, US9930297, US9872974, US9830521, US9805169, US9734294, US9721260, US9717865, US9691011, US9665847, US9582644, US9579255, US9480789, US9449296, US9367665, US9304509, US9242042, US9242039, US9195228, US9171280, US9155835, US9092559, US9092028, US9089676, US9082157, US9058584, US9058413, US9058412, US9043019, US9037479, US9028446, US9008815, US8990099, US8961441, US8812329, US8781548, US8773508, US8719053, US8671062, US8665431, US8660680, US8645155, US8591811, US8545198, US8543411, US8515515, US8491839, US8452367, US8446280, US8412297, US8330579, US8317099, US8286222, US8285561, US8257274, US8219413, US8152072, US8111431, US8035517, US8011905, US7991627, US7980467, US7979102, US7976508, US7975922, US7967778, US7963936, US7962349, US7946487, US7934648, US7911345, US7905401, US7900819, US7899509, US7898416, US7877127, US7877126, US7860727, US7859473, US7822453, US7813779, US7809420, US7801742, US7799273, US7796040, US7747345, US7698909, US7698180, US7680553, US7676382, US7637419, US7588189, US7568619, US7551077, US7537157, US7509185, US7471991, US7464879, US7444197, US7443296, US7432813, US7428442, US7395963, US7392107, US7379784, US7379783, US7304573, US2016092744, US2015250678, US2015223732, US2014328983, US2014114472, US2013325508, US2013253952, US2013177486, US2013072878, US2012158610, US2012076371, US20121215145, US2011208350, US2011154046, US2011093113, US2011021978, US2010331741, US2010300438, US2010217425, US2010090005, US2010045427, US2010010433, US2010010321, US2009281464, US2009278685, US2009112236, US2009009290, US2008235055, US2008221722, US2008211674,

US2008147015, US2008046288, US2008046263, US2008033368, US2008017710, US2008011849, US2007299421, US2007288114, US2007250414, US2007241883, US2007239112, US2007238989, US2007235534, US2007229266, US2007225672, US2007208445, US2007208308, US2007198297, US2007198116, US2007197974, US2007196909, US2007167919, US2007150092, US2007032897, US2007021856, US2006287887, US2006276923, US2006271227, US2006265246, US2006229551, US2006157491, US2005267790, US2005261938, US2005261935, US2005251278, US2005108057, US2005108044, US2005038676, US10083766, US10083197, US10052442, US10019606, US10018613, JP2014528736, JP2013519128, JP2012164311, JP2011516849, JP2009009421, EP2496283, EP2482870, EP2482870, EP2382582, EP2382582, EP1912144, EP1480153, EP1480153, DE102011076729, CN105917362, CN105641776, CN104800900, CN104800900, CN104364817, CN104144721, CN103271770, CN103271770, CN102855375, CN102792261, CN102760240, CN102711858, CN102711858, CN102256644, AU2008229745, AU2005243108,

# Abstract:

The present invention provides apparatuses and methods for marking components, supplies and kits of drug administration devices and other medical systems with quality assurance information. The invention also provides apparatuses and methods for tracking time of use of such components, supplies and kits and various apparatuses and methods for preventing use or reuse of tainted, recalled or unrecognized components, supplies and kits. Quality assurance markers (QAMs) are described which store information regarding the identity and manufacturer of disposable components, supplies and kits. The invention utilizes several QAM modalities, such as, among others, 1-D and 2-D bar codes, 1-D and 2-D symbologies, holograms, written text, radio frequency identification devices (RFIDs), integrated chip smart cards, and EEPROMs.



**Title:** DEVICE AND METHOD FOR SELECTING AND BREWING THE CONTENTS OF A CAPSULE TO PREPARE A BEVERAGE

**Priority:** EP20010126726 20011109 WO2002EP12174 20021030

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AT352239 E         | 20070215         | AT20010126726T     | 20011109         |
|         | AU2002357994 AA    | 20030519         | AU20020357994      | 20021030         |
|         | BRPI0213971 A      | 20040831         | BR2002PI13971      | 20021030         |
|         | BRPI0213971 B1     | 20130903         | BR2002PI13971      | 20021030         |
|         | CA2465898 AA       | 20040507         | CA20022465898      | 20021030         |
|         | CA2465898 C        | 20110118         | CA20022465898      | 20021030         |
|         | CN1305423 C        | 20070321         | CN20028021976      | 20021030         |
|         | CN1633252 A        | 20050629         | CN20028021976      | 20021030         |
|         | CZ20040655 A3      | 20041110         | CZ20040000655      | 20021030         |
|         | DE60126287 D1      | 20070315         | DE20016026287      | 20011109         |
|         | DE60126287 T2      | 20071115         | DE20016026287T     | 20011109         |
|         | DK1310199 T3       | 20070521         | DK20010126726T     | 20011109         |
|         | EP1310199 A1       | 20030514         | EP20010126726      | 20011109         |
|         | EP1310199 B1       | 20070124         | EP20010126726      | 20011109         |
|         | ES2279783 T3       | 20070901         | ES20010126726T     | 20011109         |
|         | HU0401877 AB       | 20050228         | HU20040001877      | 20021030         |
|         | HU0401877 AC       | 20120529         | HU20040001877      | 20021030         |
|         | IL161565 A0        | 20040927         | IL20020161565      | 20021030         |
|         | IL161565 A1        | 20090211         | IL20020161565      | 20021030         |
|         | JP2005507294 T2    | 20050317         | JP20030541410T     | 20021030         |
|         | JP4030502 B2       | 20080109         | JP20030541410T     | 20021030         |
|         | MXPA04004356 A1    | 20040811         | MX2004PA04356      | 20021030         |
|         | NO20042370 A       | 20040607         | NO20040002370      | 20040607         |
|         | NO331696 B1        | 20120227         | NO20040002370      | 20040607         |
|         | PL200203 B1        | 20081231         | PL20020369891      | 20021030         |
|         | PL369891 A1        | 20050502         | PL20020369891      | 20021030         |
|         | PT1310199 T        | 20070228         | PT20010126726T     | 20011109         |
|         | RU2004117537 A     | 20050310         | RU20040117537      | 20021030         |
|         | RU2306839 C2       | 20070927         | RU20040117537      | 20021030         |
|         | US2004237793 AA    | 20041202         | US20040840883      | 20040507         |
|         | US7673559 BB       | 20100309         | US20040840883      | 20040507         |
|         | WO03039309 A1      | 20030515         | WO2002EP12174      | 20021030         |
|         | ZA200404541 A      | 20050913         | ZA20040004541      | 20040608         |

**Probable Assignee:** NESTEC SA

**Assignee(s):(std):** DE PRODUITS NESTLE SA SOC ; DES PRODUITS NESTLE S A SOC ; DES PRODUITS NESTLE SOC SA ; NESTLE SA ; ZURCHER ALAIN ; PILLOT PIERRE ; NESTEC SA

**Assignee(s):** SOS ETE DE PRODJUI NESTLE SA ; NESTLE S A ; SOS ETE DE PRODJUI NESTLE S A ; NESTEC S A ; DES PRODUITS NESTLE SA SOC

**Inventor(s):(std):** PIERRE ZURCHER ALAIN PILLOT ; PIERRE PILLOT ; ALAIN ZURCHER ; TSURKHER ALEN ; PIJO P ER ; PILLOT PIERRE ; ZURCHER ALAIN

**Inventor(s):** ZURCHER ALAIN PILLOT PIERRE ; PIJO P'ER

**Agent(s):** SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; DR YITZHAK HESS AND PARTNERS; K AND L GATES LLP

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

**International class (IPC 8-9):** A47J31/00 A47J31/36 A47J31/40 A47J31/44 B67D3/00 G07F13/10 (Advanced/Invention); A47J31/00 A47J31/24 A47J31/40 A47J31/44 B67D3/00 G07F13/10 (Core/Invention)

**International class (IPC 1-7):** A23L1/00 A47J31/00 A47J31/40 A47J31/44 B67D3/00

**CPC:** A47J31/3642 A47J31/4492 G07F13/10

**European class:** A47J31/36A4H A47J31/40B A47J31/40B2 A47J31/40H A47J31/44H G07F13/10

**US class:** 99/275 99/275P 99/289R 99/295 99/302R

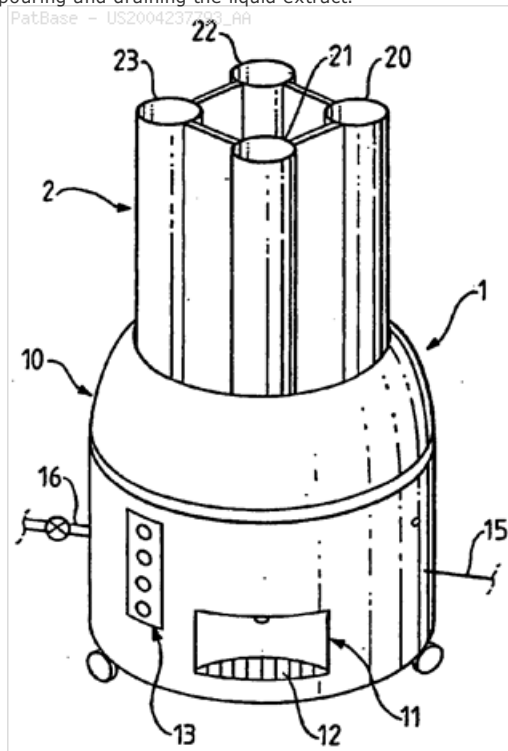
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**Cited documents:** WO02078499 A1, US5134924 A, US4724752 A, US4363451 A, US3812273 A, US3521790 A, EP1089240 A2, EP1046366 A1, EP1002490 A1, EP0110102 A1, CH471570 A,

**Forward Citations:** WO17211680, WO17211679, WO17211677, WO12093107, WO12072764, WO12072761, WO11144723, WO09077488, WO09077488, WO08113459, WO06126230, WO06114517, WO06114517, WO06069801, USD743786, USD743252, US9994388, US9974411, US9936834, US9919864, US9907432, US9867493, US9834370, US9833105, US9828153, US9790076, US9743801, US9743800, US9730547, US9723944, US9676538, US9668606, US9545171, US9451847, US9386877, US9357872, US9351600, US9315370, US9138096, US9113654, US9101163, US9084509, US9066624, US9062912, US9049960, US8998037, US8978544, US8974846, US8973485, US8950317, US8887622, US8852659, US8820213, US8800433, US8784915, US8771768, US8695484, US8567304, US8168247, US8087347, US8033211, US7921766, US7673558, US7640843, US7607385, US7592027, US7533604, US7533603, US7418899, US7340990, US7328651, US7322277, US7316178, US7308851, US7287461, US7255039, US7243598, US7231869, US7219598, US7213506, US7097074, US2017196397, US2016244249, US2016242456, US2016242455, US2015265091, US2015239723, US2015132449, US2015040769, US2013298778, US2012104025, US2010263546, US2009250482, US2008245236, US2008115673, US10046904, US10046903, US10034573, RU2614642, RU2610400, RU2604798, RU2600721, RU2595584, RU2577734, RU2568083, RU2560338, RU2526685, KR101271789, JP2015512707, JP2012502725, JP2011522568, JP2011518597, JP2008259851, JP2007525385, ITMI20130677, ITMI20110083, FR3035731, FR2884729, ES2376352, EP3089126, EP2529648, EP2306417, EP2274210, EP2274210, EP2271239, EP2236062, EP2106727, EP2071986, EP1830682, DE102016210033, DE102013202677, DE102011053294, CN105408714,

**Abstract:**

A device for preparing drinks that incorporate a capsule selection function connected to a system for brewing the contents of the capsules to enable brewing to take place under optimal conditions. The device includes a storage system comprising capsules arranged in several sets, a mechanism for capturing a capsule individually from a set and releasing the capsule into a brewing system. The capture mechanism is able to move between the storage system and the brewing system and is designed in such a way as to adopt at least two positions, a first or reception position in which the capsule is held and is able to be transferred by the capture means and a second or release position in which the capture means can be opened to release the capsule from the capture mechanism. The device provides advantages in the handling of the capsule after its selection, in particular, its transfer, the brewing of its contents, and, optionally, the ejection of the spent capsule in a reliable, rapid and automated manner. In addition, the invention provides more reliable usage with no problems of pouring and draining the liquid extract.



**Title:** Anti-fake mark  
**Priority:** CN20022078376U 20020713

| Family: | Publication number                                                                            | Publication date | Application number | Application date |
|---------|-----------------------------------------------------------------------------------------------|------------------|--------------------|------------------|
|         |  CN2550776 Y | 20030514         | CN20022078376U     | 20020713         |

**Probable Assignee:** UNIV HUAZHONG SCIENCE TECH  
**Assignee(s):(std):** UNIV HUAZHONG SCIENCE TECH  
**Assignee(s):** HUAZHONG UNIV OF SCIENCE AND TECHNOLOGY  
**Inventor(s):(std):** WANG SHUCHU ; CHEN RUJUN ; CAO HANQIANG  
**Inventor(s):** SHUCHU WANG ; RUJUN CHEN ; HANQIANG CAO  
**International class (IPC 8-9):** G02B5/00 G09F3/02 (Advanced/Invention);  
G02B5/00 G09F3/02 (Core/Invention)  
**International class (IPC 1-7):** G02B5/00 G09F3/02

[Classification Explorer](#)

**Forward Citations:** US9868588, CN103930008, CN103930008, CN103870863, CN103870863, CN102903298,

**Abstract:**

The utility model relates to an anti-counterfeit label, wherein, an image layer is arranged on a mucilage glue layer, and a plastic base is arranged on the image layer. The utility model is characterized in that the image layer is a chart-changing figure layer with a relief sculpture structure; a metal reflective layer can be arranged between the plastic base and the mucilage glue layer; the chart-changing figure layer with the relief sculpture structure is also arranged on the metal reflective layer. The anti-counterfeit label hiding information is named as "chart-changing anti-counterfeit label" by an inventor, and is developed and invented for improving anti-counterfeit performance of the anti-counterfeit label. As the information hidden cannot be judged and identified by people and the detection is operated through machine identification, the utility model has the advantages of increasing difficult in counterfeiting, and enhancing the anti-counterfeit performance of the anti-counterfeit label.

**Title:** CARTRIDGE CONTAINING A SINGLE SERVING OF A PARTICULATE SUBSTANCE FOR PREPARING A BEVERAGE

**Priority:** DE20021011327 20020314 DE20022021780U 20020314 CA20032419015 20030217  
CA20032419015 20030217 DE20035001450 20030220

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AR038960 AA        | 20050202         | AR2003P100870      | 20030312         |
|         | AT307769 E         | 20051115         | AT20030003228T     | 20030220         |
|         | AT345286 E         | 20061215         | AT20030003228T     | 20030220         |
|         | AT345286 E         | 20061215         | AT19280030032      | 20030220         |
|         | AT345286 E         | 20061215         | AT20030003228      | 20030220         |
|         | AU2003200627 AA    | 20031002         | AU20030200627      | 20030221         |
|         | AU2003200627 BB    | 20090625         | AU20030200627      | 20030221         |
|         | AU2003200627 BH    | 20130502         | AU20030200627      | 20030221         |
|         | BRPI0300554 A      | 20040810         | BR2003PI00554      | 20030312         |
|         | BRPI0300554 B1     | 20180417         | BR2003PI00554      | 20030312         |
|         | CA2419015 AA       | 20030914         | CA20032419015      | 20030217         |
|         | CA2419015 C        | 20070410         | CA20032419015      | 20030217         |
|         | CN1232212 C        | 20051221         | CN20031019969      | 20030314         |
|         | CN1444894 A        | 20031001         | CN20031019969      | 20030314         |
|         | DE10211327 A1      | 20030925         | DE20021011327      | 20020314         |
|         | DE10211327 B4      | 20150924         | DE20021011327      | 20020314         |
|         | DE20221780 U1      | 20071018         | DE20022021780U     | 20020314         |
|         | DE50301450 D1      | 20071115         | DE20035001450      | 20030220         |
|         | DK1344722 T3       | 20070312         | DK20030003228T     | 20030220         |
|         | EP1344722 A1       | 20030917         | EP20030003228      | 20030220         |
|         | EP1344722 B1       | 20061115         | EP20030003228      | 20030220         |
|         | EP1344722 B2       | 20111019         | EP20030003228      | 20030220         |
|         | ES2275031 T3       | 20070601         | ES20030003228T     | 20030220         |
|         | ES2275031 T5       | 20120223         | ES20030003228T     | 20030220         |
|         | HK1059203 A1       | 20040625         | HK20040101451      | 20040227         |
|         | HK1059203 A1       | 20060825         | HK20040101451      | 20040227         |
|         | HK1059203 A3       | 20040625         | HK20040101451      | 20040227         |
|         | HK1059203 B        | 20060825         | HK20040101451      | 20040227         |
|         | IL154721 A0        | 20031031         | IL20030154721      | 20030303         |
|         | IL154721 A1        | 20071031         | IL20030154721      | 20030303         |
|         | IN199328 B         | 00000000         | IN2003KO00126      | 20030227         |
|         | JP2003265320 A2    | 20030924         | JP20030046935      | 20030225         |
|         | JP3765795 B2       | 20060412         | JP20030046935      | 20030225         |
|         | KR20030074403 A    | 20030919         | KR20030015588      | 20030313         |
|         | MXPA03002239 A1    | 20030922         | MX2003PA02239      | 20030314         |
|         | NZ524241 A         | 20030530         | NZ20030524241      | 20030217         |
|         | PL202974 B1        | 20090831         | PL20030359142      | 20030313         |
|         | PL359142 A1        | 20030922         | PL20030359142      | 20030313         |
|         | PT1344722 T        | 20070131         | PT20030003228T     | 20030220         |
|         | RU2003106975 A     | 20041110         | RU20030106975      | 20030313         |
|         | RU2243934 C2       | 20050110         | RU20030106975      | 20030313         |
|         | SG102708 A1        | 20040326         | SG20030000869      | 20030220         |
|         | SI1344722 T1       | 20070430         | SI20030030660T     | 20030220         |
|         | TH59126 A          | 20031028         | TH20031000643      | 20030226         |
|         | TW200303735 A      | 20030916         | TW20030103376      | 20030219         |
|         | TWI291863 B        | 20080101         | TW20030103376      | 20030219         |
|         | US2003172813 AA    | 20030918         | US20030383210      | 20030306         |
|         | US7543527 BB       | 20090609         | US20030383210      | 20030306         |

**Probable Assignee:** CAFFITALY SYSTEM SPA

**Assignee(s):(std):** CAFFITA SYSTEM S P A ; CAFFITA SYSTEM SPA ; RENE SCHIFFERLE ; SCHIFFERLE RENE ; HIFOERIER LENI ; CAFFITALY SYSTEM SPA ; CAFFITALY SYSTEM S P A

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**Inventor(s):(std):** SCHIFFERLE RENE ; SCHMED ARTHUR ; SHIFFERLE RENE ; HIFOERIER LENI ; RENE SCHIFFERLE

**Inventor(s):** LENI HIFOERIER

**Agent(s):** PATENT ATTORNEY SERVICES; CASSAN MACLEAN; PONCHIROLI SIMONE; CHINA PATENT AGENT HK LTD 22 F GREAT EAGLE CENTRE 23 HARBOUR ROAD; CHINA PATENT AGENT HK LTD; SANFORD TCOLB AND CO; MAGINOT MOORE AND BECK LLP

**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT SE SI SK TR

**International class (IPC 8-9):** B65D81/00 A47J A47J27/10 A47J31/00 A47J31/06 A47J31/30 A47J31/40 A47J31/44 B65B29/02 B65D81/34 B65D85/00 B65D85/804 B65D85/816 (Advanced/Invention); A47J31/06 (Advanced/Non-invention); A47J31/00 B65D81/00 (Core/Invention)

**International class (IPC 1-7):** A23F3/00 A47J27/10 A47J31/00 A47J31/06 A47J31/24 A47J31/30 A47J31/40 A47J31/44 B65D81/00 B65D81/34 B65D85/04 B65D85/804

**CPC:** B65D85/8043 A47J31/0673 A47J31/3695

**European class:** A47J31/06P4B A47J31/36B4D2 B65D81/00B3 B65D85/804B

**US class:** 426/115 426/77 99/275 99/275P 99/295 99/315 99/323

[Classification Explorer](#)

**Cited documents:** WO0056629 A1, US6786134 BB, US5472719 A, US5325765 A, US5242702 A, US4921712 A, US3589272

A, US2778739 A, US2199592 A, US1015407 A, GB2023086 A1, FR2668451 A1, FR2556323 A1, EP1364605 A1, EP1247756 A1, EP1151707 A1, EP1101430 A1, EP0554464 A1, EP0521397 A1, EP0521188 A1, EP0512470 A1, EP0512468 A1, EP0468078 A1, EP0389141 A1, EP0337615 A1, EP0272922 A2, EP0211511 A1, DE2326919 A1, DE1924552 A1,

#### Forward Citations:

WO18065205, WO17187024, WO17182766, WO16198534, WO16159835, WO16142932, WO16087981, WO16085361, WO16016819, WO16012914, WO15177703, WO15158838, WO15062703, WO14163495, WO14082976, WO14049143, WO14033341, WO13189923, WO13183023, WO13136210, WO13105038, WO13080073, WO13053757, WO12038063, WO11137550, WO11073310, WO10137955, WO10137953, WO10137951, WO09153815, WO09133134, WO08126045, WO08125256, WO08113779, WO08113779, WO06053635, WO06021405, WO06021405, WO06008243, WO05092160, WO05090196, USD757536, USD743786, USD743252, USD708057, USD703039, USD697797, USD695111, USD694620, USD693242, USD685630, USD678050, USD675091, USD675090, USD675089, US9999315, US99994389, US99994388, US9969546, US9968217, US9944456, US9932168, US9919864, US9877495, US9815617, US9815616, US9801495, US9783361, US9743798, US9725231, US9708118, US9700171, US9688465, US9676546, US9675203, US9675201, US9669992, US9663289, US9656798, US9629494, US9615597, US9611089, US9604776, US9598230, US9538877, US9527661, US9516970, US9504348, US9487348, US9486105, US9481508, US9469471, US9468230, US9463921, US9452879, US9439532, US9428329, US9428328, US9409705, US9409703, US9394101, US9387978, US9371174, US9359128, US9359126, US9334104, US9307857, US9271601, US9248955, US9242791, US9161652, US9149151, US9149150, US9149149, US9144343, US9131799, US9114902, US9108794, US9096373, US9079706, US8986761, US8916220, US8906435, US8895090, US8850960, US8846120, US8833240, US8813633, US8808777, US8784922, US8651012, US8640604, US8613247, US8535743, US8512886, US8512776, US8505440, US8501254, US8491948, US8464632, US8464631, US8464630, US8443717, US8424447, US8402883, US8399035, US8393261, US8361527, US8327754, US8322271, US8307754, US8304006, US8163318, US8161868, US8003146, US7966927, US7964230, US7947316, US7891286, US7836819, US7770512, US7640842, US7594470, US7552672, US7032504, US2017065121, US2017020328, US2015257586, US2015251847, US2015197394, US2015175347, US2015157164, US2015140184, US2015021209, US2014314919, US2013156897, US2013125762, US2012263833, US2012263830, US2012258221, US2012251692, US2012148709, US2012070551, US2012070543, US2011250319, US2011244085, US2011111098, US2011045144, US2011033580, US2011000378, US2010303965, US2010258010, US2010180775, US2010180774, US2010170402, US2010077928, US2010064899, US2010043646, US2010043645, US2010043644, US2010003371, US2009320693, US2009126577, US2009047389, US2008302251, US2008302248, US2008257165, US2008156196, US2007259074, US2007259073, US2007186784, US2007181003, US2007000390, US2006236871, US2006196364, US2006054030, US2005266122, US2005166763, US2005150390, US10071851, US10070751, US10023378, US10010211, US09999315, TWI535405, TWI535404, TWI367849, TWI358272, RU2610390, RU2604595, RU2602058, RU2602052, RU2569281, RU2568397, RU2555946, RU2546426, RU2533706, RU2506031, RU2493082, NO340497, KR101832695, KR101832006, KR101707084, KR101632016, KR101244500, JP6185691, JP6174153, JP6062555, JP6055410, JP6050293, JP6022707, JP5946828, JP5838198, JP5766692, JP5735959, JP4865697, JP2016504069, JP2016163691, JP2015533563, JP2015533532, JP2015037557, JP2013540475, JP2013530798, JP2013525041, JP2012530532, JP2012530528, JP2012530526, JP2012530525, JP2012530525, JP2012530524, JP2012530521, JP2012529946, JP2012508642, JP2011156350, JP2010537764, JP2010501307, JP2010501305, JP2010155118, JP2009528078, JP2009511143, JP20090006179, JP2008520298, JP2008259851, JP2007530108, ITVR20120121, ITVR20120044, ITMO20120007, ES2668078, ES2398278, EP3301041, EP3210911, EP3170766, EP3023362, EP3023360, EP3022133, EP2868597, EP2801538, EP2801538, EP2782849, EP2696730, EP2633787, EP2572610, EP2566784, EP2565132, EP2516296, EP2510843, EP2510805, EP2510805, EP2510804, EP2510804, EP2510803, EP2510803, EP2510803, EP2510802, EP2510802, EP2510802, EP2431301, EP2409932, EP2384997, EP2384996, EP2298671, EP2284102, EP2280885, EP2196407, EP2177136, EP2105074, EP1980501, EP1975087, EP1944248, EP1865815, EP1837294, EP1837294, EP1826148, EP1792850, EP1792850, EP1784344, EP1710173, EP1580144, EP1580143, EP1579793, EP1579792, EP1579792, EP1579791, EP1579791, EP1555219, DE202009017808, DE102012223291, DE102012111685, DE102012111684, DE102012109186, DE102012105282, DE102011115833, DE102011012881, DE102010012788, DE102010012788, DE102007041102, DE102005055182, DE102005055182, DE102004056317, CN107380753, CN107000928, CN106660676, CN106029524, CN106029524, CN105916418, CN105263824, CN105246798, CN105246795, CN105193269, CN105035561, CN104640786, CN104640786, CN104586261, CN104586261, CN104334059, CN103635123, CN103180225, CN102574634, CN102573578, CN102573577, CN102406446, CN102406446, AU2010227121, AU2009347077, AU2009347077, AU2008238915, AU2007291349, AU2005200115,

#### Abstract:

A cartridge containing a single serving of a particulate substance extractable by means of water for preparing a beverage, preferably an espresso coffee beverage is disclosed. Between the bottom of the cartridge and the particulate substance as well as between the particulate substance and the cover of the cartridge, in each case a fluid director member is provided, having a plurality of small openings. The one close to the cover serves as a water distribution member for distributing the water, fed into the cartridge through a central opening pierced therein, evenly over the particulate substance, and the one close to the bottom serves as a beverage collection member to lead the beverage to a central opening pierced into the bottom of the cartridge. Both director members are provided with a recess directed towards the interior of the cartridge, allowing the penetration of a piercing member without damage to the director members.



Title:

Priority:

Family:

INFORMATION ENCODING ON SURFACES BY VARYING SPECTRAL EMISSIVITY

US20020354374P 20020205      US20030355670 20030201      US20060387383 20060322

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003146288 AA    | 20030807         | US20030355670      | 20030201         |
| US2006163363 AA    | 20060727         | US20060387383      | 20060322         |
| US7044386 BB       | 20060516         | US20030355670      | 20030201         |
| US7267285 BB       | 20070911         | US20060387383      | 20060322         |

Probable Assignee:

Assignee(s):(std):

Inventor(s):(std):

Agent(s):

International class (IPC 8-9):

International class (IPC 1-7):

CPC:

European class:

US class:

BERSON WILLIAM

BERSON WILLIAM

BERSON WILLIAM

FISH AND NEAVE IP GROUP, ROPES AND GRAY LLP; FISH AND NEAVE IP GROUP ROPES AND GRAY LLP; FISH AND NEAVE IP GROUP OF ROPES AND GRAY LLP

G06K1/12 G06K19/06 G06K7/12 (Advanced/Invention); G06K1/00 G06K19/06 G06K7/12 (Core/Invention)

G06K19/06

G06K1/123 G06K7/12 G06K19/06028 G06K2019/06225 G06K2019/06271

G06K1/12B1 G06K19/06C1B G06K7/12 S06K19/06W12 S06K19/06W2

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Classification Explorer

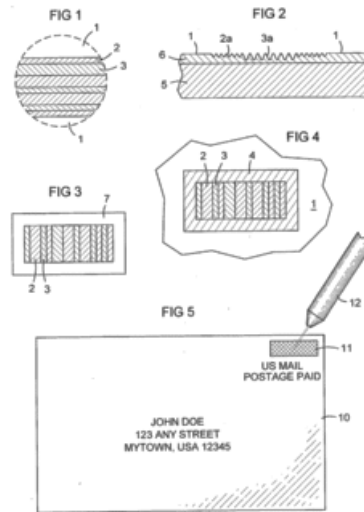
Cited documents:

Forward Citations:

US7079230 BA, US7044386 BB, US7038766 BB, US7038276 BB, US6874639 BB, US6874639 BA, US6874639 B1, US6793138 BB, US6793138 BA, US6793138 B1, US6669093 BA, US6612494 BA, US6610351 BB, US6610351 BA, US6610351 B1, US6576155 BA, US6561422 BA, US6543808 BA, US6355598 BA, US6354501 BA, US6352751 BA, US6309690 BA, US6299346 BA, US6280069 BA, US6274873 BA, US6255948 BA, US6203069 BA, US6191851 BA, US6168081 BA, US6168081 B1, US6123263 A, US6095682 A, US6069190 A, US6039257 A, US6025926 A, US6001510 A, US5981040 A, US5971276 A, US5963662 A, US5908527 A, US5906678 A, US5861618 A, US5814806 A, US5709918 A, US5704712 A, US5701538 A, US5686725 A, US5653844 A, US5648650 A, US5597997 A, US5597237 A, US5582103 A, US5571311 A, US5568177 A, US5460451 A, US5401960 A, US5315098 A, US5308161 A, US5296887 A, US5294198 A, US5282017 A, US5281261 A, US5259907 A, US5184148 A, US5166080 A, US5155080 A, US4919542 A, US4910185 A, US4889367 A, US4888475 A, US4848496 A, US4840674 A, US4840496 A, US4708493 A, US4647775 A, US4647774 A, US4627819 A, US4625101 A, US4530961 A, US4529633 A, US4521861 A, US4417822 A, US4359633 A, US4312915 A, US4264366 A, US4210916 A, US4044231 A, US3919447 A, US3918029 A, US3891829 A, US3829662 A, US3802101 A, US3640009 A, US3621249 A, US3536894 A, US3477156 A, US3468046 A, US3455577 A, US3245697 A, US3239815 A, US2002056756 AA, US2002054201 AA, JP9161002 A2,

WO14201438, WO14201438, WO13072326, WO09068836, US9869636, US9664610, US9625371, US9316581, US9082322, US9041920, US8992105, US8988666, US8911845, US8888207, US8684416, US8659797, US8583394, US8408602, US8368878, US8285510, US8235298, US8081304, US8076630, US7996173, US7931413, US7829162, US7802730, US7762473, US7728726, US7651031, US7621451, US7619520, US7420673, US7407195, US7328851, US7267285, US2017174419, US2014328977, US2010302598, US2010108767, US2009112101, US2009040563, US2008282593, US2008133389, US2008121727, US2008100836, US2008057233, US2007090197, US2006171757, US2006171756, US2006170557, US2006170436, US2006163492, US2006163363, US2006086803, US2005230962, RU2605169, JP6018215, JP2014533159, EP2026252, EP1650693, EP1587048, DE102006011143, CN103945743, AU2012338892,

**Abstract:**  
A method for applying surface modifications in at least two patterns that differ in spectral emissivity by known amounts. The patterns form an information-encoding sequence of transitions of differential emissivity along a scan path over the patterns, that encodes a set of information. This information is decoded by a scanner sensitive to emissivity in the given portion of the electromagnetic spectrum, and sensitive to transitions in emissivity of the known amounts, when scanned along the scan path, combined with knowledge of the expected emissivity values of the patterns. This provides secure informational marking of articles and documents, including mail. The patterns may be visible, or hidden, but the emissivity values are not duplicated by standard office equipment, so authenticity of the patterns can be determined using the special emissivity scanner.



Title:

INNER REGION IDENTIFIER FOR OPTICAL DISK

Priority:

US20020106475 20020325

Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003179688 AA    | 20030925         | US20020106475      | 20020325         |
| US7016294 BB       | 20060321         | US20020106475      | 20020325         |

Probable Assignee:

ENHANCED DATA SOLUTIONS LLC

Assignee(s):(std):

DPHI ACQUISITIONS INC

Assignee(s):

ENHANCED DATA SOLUTIONS LLC ; MEDOWER BRIAN S ; BLANKENBECKLER DAVID L ; DATAPLAY INC

Inventor(s):(std):

BLANKENBECKLER DAVID L ; MEDOWER BRIAN S

Agent(s):

JONATHAN W; MACPHERSON KWOK CHEN AND HEID

International class (IPC 8-9):

G11B7/007 G11B7/24 (Advanced/Invention);  
G11B7/007 G11B7/24 (Core/Invention)

International class (IPC 1-7):

G11B7/24

CPC:

G11B7/00736

European class:

G11B7/007R

US class:

369/273 369/275.3 369/52.1 G9B/7.033

Classification Explorer

Cited documents:

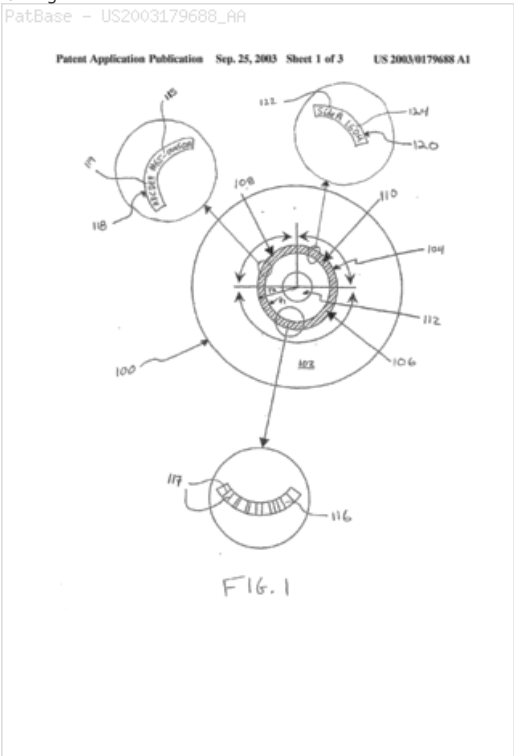
US6775215 BB, US6775215 BA, US6775215 B1, US6751173 BA, US6052465 A, US5761301 A, US5706266 A, US5703858 A, US5541904 A, US4983815 A, US4961077 A, US4606018 A,

Forward Citations:

US9811704, US9582699, US9268984, US8315133, US8279731, US8147729, US7914711, US7301860, US7292509, US2016232390, US2011007618, US2010278021, US2010014408, US2009046553, US2008168193, US2008117791, US2006266834, US2005213483, US2005105457, US2005013218, US2004012793, US2003202436, US2003137065, KR101296098, EP2276026, CN105592761, CN103945739, CN103945739, CN101950575,

Abstract:

A first surface optical disk is disclosed that has machine readable code information, such as bar code information, disposed thereon to permit a disk drive or other device to obtain certain basic information regarding the disk in an efficient and reliable manner. The machine readable code may include error detection and error correction code to correct errors, such as those caused by surface dust, that may arise during reading the machine readable code. The machine readable code may be disposed within a portion of a ring on the optical disk. Human readable alphanumeric characters, including graphics, identifying the side of the optical disk and other basic information may also be disposed within the ring.



**Title:** MACHINE FOR THE PREPARATION OF BEVERAGES**Priority:** GB20030001747 20030124 US20030462538P 20030411 EP20040250390 20040123  
US20040763444 20040123 WO2004GB00287 20040123

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AU2004206100 AA    | 20040805         | AU20040206100      | 20040123         |
|         | CA2513891 AA       | 20050720         | CA20042513891      | 20040123         |
|         | CA2513891 C        | 20120515         | CA20042513891      | 20040123         |
|         | CN100591253 C      | 20100224         | CN200480007885     | 20040123         |
|         | CN1780574 A        | 20060531         | CN200480007885     | 20040123         |
|         | EP1440640 A2       | 20040728         | EP20040250390      | 20040123         |
|         | EP1440640 A3       | 20040804         | EP20040250390      | 20040123         |
|         | EP1440640 B1       | 20071031         | EP20040250390      | 20040123         |
|         | EP1440640 B2       | 20140618         | EP20040250390      | 20040123         |
|         | EP1440640 B9       | 20140910         | EP20040250390      | 20040123         |
|         | EP1629752 A2       | 20060301         | EP20050026204      | 20040123         |
|         | EP1629752 A3       | 20080319         | EP20050026204      | 20040123         |
|         | EP1629752 B1       | 20090819         | EP20050026204      | 20040123         |
|         | EP1629752 B9       | 20100310         | EP20050026204      | 20040123         |
|         | GB200301747 A0     | 20030226         | GB20030001747      | 20030124         |
|         | GB200505992 A0     | 20050427         | GB20050005992      | 20030124         |
|         | GB2397509 A1       | 20040728         | GB20030001747      | 20030124         |
|         | GB2397509 B2       | 20051123         | GB20030001747      | 20030124         |
|         | GB2409965 A1       | 20050720         | GB20050005992      | 20030124         |
|         | GB2409965 B2       | 20050921         | GB20050005992      | 20030124         |
|         | JP2006517429 T2    | 20060727         | JP20060500242T     | 20040123         |
|         | KR101073804 B1     | 20111013         | KR20057013525      | 20040123         |
|         | KR20050105986 A    | 20051108         | KR20057013525      | 20040123         |
|         | LT2005079 A        | 20060725         | LT20050000079      | 20050823         |
|         | MXPA05007864 A1    | 20051018         | MX2005PA07864      | 20040123         |
|         | NO20053933 A       | 20051021         | NO20050003933      | 20050823         |
|         | NO20053933 A0      | 20050823         | NO20050003933      | 20050823         |
|         | PL204367 B1        | 20100129         | PL20040377942      | 20040123         |
|         | PL377942 A1        | 20060220         | PL20040377942      | 20040123         |
|         | RU2005126705 A     | 20060610         | RU20050126705      | 20040123         |
|         | RU2331348 C2       | 20080820         | RU20050126705      | 20040123         |
|         | TW200509843 A      | 20050316         | TW20040101693      | 20040127         |
|         | TWI352585 B        | 20111121         | TW20040101693      | 20040127         |
|         | US2004197444 AA    | 20041007         | US20040763444      | 20040123         |
|         | US7607385 BB       | 20091027         | US20040763444      | 20040123         |
|         | WO04064585 A1      | 20040805         | WO2004GB00287      | 20040123         |

**Probable Assignee:** DOUWE EGBERTS BV KONINKLL**Assignee(s):(std):** BALLARD COLIN ; HALLIDAY ANDREW ; KRAFT FOODS R AND D ; KRAFT FOODS R AND D INC ; PANESAR SATWINDER ; SMITH DAVID ; KRAFT FUDZ R U D INK**Assignee(s):** KRAFT FOODS R AMP AMP ; D INC ; DOUWE EGBERTS BV KONINKLL**Inventor(s):(std):** BALLARD COLIN ; BALLARD COLIN DARREL ; BOLLARD KOLIN ; DAVID SMITH ; HALLIDAY ANDREW ; HALLIDAY ANDREW MICHAEL ; KHOLLIDEHJ EHNDRIJ ; PANESAR SATWINDER ; PANESAR SATWINDER SINGH ; SMIT DEHVID ; SMITH DAVID ; SATWINDER PANESAR ; DAVID HALLIDAY ANDREW BALLARD ; COLIN BALLARD ; ANDREW HALLIDAY**Inventor(s):** ANDREW MICHAEL HALLIDAY ; COLIN DARREL BALLARD ; HALLIDAY ANDREW BALLARD COLIN PANESAR SATWINDER SM ; SATWINDER SINGH PANESAR ; HALLIDAY ANDREW BALLARD COLIN PANESAR ; HALLIDAY ANDREW BALLARD COLIN PANESAR SATWINDER SMITH DAVID**Agent(s):** GRIFFITH HACK ; MCFADDEN FINCHAM ; OSLER HOSKIN AND HARCOURT LLP ; BOULT WADE TENNANT ; THOMSON NEIL DAVID ; FITCH EVEN TABIN AND FLANNERY**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**International class (IPC 8-9):** A47J31/06 A47J31/34 A47J31/36 A47J31/40 A47J31/44 A47J31/56 B65D81/00 B65D85/804 (Advanced/Invention); A47J31/40 (Advanced/Non-invention); A47J31/06 A47J31/24 A47J31/40 A47J31/44 B65D81/00 B65D85/804 (Core/Invention)**International class (IPC 1-7):** A23B4/00 A47J31/36 A47J31/40 B65D85/804**CPC:** A47J31/4407 A47J31/446 B65D85/8043 A47J31/56 A47J31/0673 A47J31/369 A47J31/3695 A47J31/4492 B65D2203/06**European class:** A47J31/06C A47J31/06L A47J31/06P4B A47J31/36B4D A47J31/36B4D2 A47J31/40B A47J31/40H A47J31/44A1 A47J31/44A4 A47J31/44H A47J31/56 B65D81/00B3 B65D85/804B**US class:** 426/112 426/112P 99/280 99/282 99/295[Classification Explorer](#)**Cited documents:** WO9827854 A1, WO9717006 A1, WO9516377 A1, WO9507648 A1, WO8807472 A1, WO03065859 A3, WO03065859 A2, WO03059778 A3, WO03059778 A2, WO03039309 A1, WO03026470 A2, WO03005295 A1, WO0228241 A1, WO0228241, WO0219875 A1, WO02092439 A2, WO02087400 A1, WO02085170 A3, WO02085170 A2, WO02082962 A1, WO02078498 A1, WO02074661 A1, WO02074144 A2, WO02074143 A2, WO0182760 A1, WO0160220 A1, WO0160219 A1, WO0158786 A1, WO0130218 A1, WO0115582 A1, WO0042891 A1, WO0028868 A1, USD489930 S1, USD479939 S1, USD475567 S1, USD461358 S1, USD460653 S1, USD459628 S1, USD452107 S1, USD443792 S1, USD423863 S1, USD419821 S1, USD255529 S1, US6941855 BB, US6759072 BA, US6758130 BB, US6655260 BB, US6645537 BB, US6612224 BB, US6607762 BB, US6606938 BB, US6405637 BA, US6358545 BA, US6347725 BA,

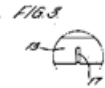
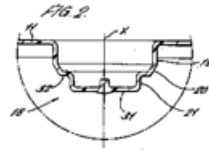
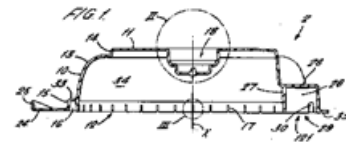
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#### Forward Citations:

WO17085020, WO17074208, WO17074207, WO17031212, WO16203471, WO16176779, WO16126904, WO13078379, WO13078379, WO12083194, WO12083194, WO12080597, WO12062842, WO12031106, WO1144719, WO11144040, WO11089049, WO11089048, WO10112353, WO10076264, WO10076263, WO10003878, WO08114210, WO08104751, WO08049223, WO06077259, WO06050856, WO06032565, USD647399, USD647398, USD637484, US9999316, US9994388, US9980596, US9918585, US9907432, US9883767, US9828153, US9815617, US9807975, US9801495, US9756977, US9743802, US9743801, US9743800, US9730547, US9723944, US9718606, US9708109, US9676538, US9669992, US9668606, US9668452, US9648980, US9598230, US9582699, US9578984, US9555957, US9545171, US9545170, US9538876, US9481508, US9481506, US9463921, US9451847, US9402406, US9386877, US9375112, US9352287, US9339143, US9320382, US9272827, US9268984, US9260284, US9260238, US9248954, US9247846, US9198533, US9149151, US9149150, US9149149, US9125518, US9114902, US9113654, US9101163, US9084509, US9079706, US8996178, US8978544, US8978543, US8974846, US8950317, US8936819, US8887622, US8857317, US8852659, US8844427, US8814000, US8794127, US8784915, US8771768, US8740020, US8722124, US8688277, US8647691, US8590753, US8567304, US8563058, US8515574, US8505440, US8490541, US8460732, US8459179, US8434642, US8425957, US8399035, US8371211, US8367133, US8361527, US8327754, US8322271, US8180204, US8168247, US8162176, US8087347, US8033211, US7964230, US7947316, US7863546, US7798054, US7401545, US2017020328, US2016249765, US2016244249, US2016242456, US2016242455, US2016222332, US2015257586, US2014328983, US2014322412, US2014170278, US2014109772, US2013129876, US2013078340, US2013025465, US2013014648, US2012295234, US2012207893, US2012060698, US2011250333, US2011110180, US2011027425, US2010326283, US2010275786, US2010189844, US2010092629, US2010083841, US2010040743, US2009022855, US2009007792, US2008264267, US2008184895, US2008173181, US2008160153, US2008148948, US2008089982, US2008008461, US2007196402, US2007175334, US2007169635, US2007163446, US2006096465, US10098494, US10080459, US10070751, US10046959, US10046904, US10046903, US10043226, US10034570, US10022011, US09999316, TWI526183, RU2663112, RU2647791, RU2614092, RU2599705, RU2595591, RU2587060, RU2584111, RU2571197, RU2560312, RU2557729, RU2552985, RU2550486, RU2544134, RU2493764, RU2472414, KR20140128987, KR20110100309, KR20110100308, KR101856384, KR101726887, KR101676056, KR101654679, KR101542293, KR101322877, JP2017127650, JP2016521139, JP2016504082, JP2013529112, JP2013510680, JP2012514492, JP2012513785, JP2012513784, JP2010518999, JP2009511143, JP2008518700, JP2008503285, JP2008259851, ITTO20081006, ITRM20110327, FR2896392, FR2874210, EP3190067, EP3175745, EP3167775, EP3132725, EP3085642, EP2992792, EP2976975, EP2571404, EP2498900, EP2498900, EP2345352, EP2345351, EP2266446, EP2236437, EP2129270, EP1974638, EP1950150, EP1938720, EP1827180, EP1813335, EP1810600, EP1810600, EP1791770, DE102014108930, CN105982555, CN105942862, CN105686642, CN105342460, CN105283104, CN104379033, CN104138208, CN104093340, CN103249335, CN103249335, CN103237482, CN103237482, CN103140154, CN103140154, CN103006064, CN102781290, CN102781290, CN102770199, CN102567694, CN102551526, CN102365214, CN102365214, CN102273941, CN102264266, CN102264266, CN102264265, AU2011208836, AU2011208836, AU2011208836, AU2006207464, AU2006207464, AU2006207464,

#### Abstract:

A low pressure beverage preparation system for automatically preparing a range of beverage types from a range of beverage cartridges, the system comprising: a beverage preparation machine; and a plurality of beverage cartridges, each beverage cartridge containing one or more beverage ingredients associated with a specific beverage type, wherein the beverage preparation system comprises: a. means for receiving one of said plurality of beverage cartridges in said beverage preparation machine and means for supplying, in use, to said beverage cartridge an aqueous medium at a pressure of less than 2 bar to produce a beverage from the one or more beverage ingredients contained therein; b. a reader in said beverage preparation machine for automatically interpreting a code written on said beverage cartridge; c. processing means for creating a specific brewing cycle based on said code; d. means for automatically adjusting a temperature of said aqueous medium based on said code prior to supply of said aqueous medium to the beverage cartridge; e. means in at least some of said plurality of beverage cartridges for optionally, dependant on beverage type, producing foaming of the beverage; and f. a user interface for initiating an operating cycle; wherein the beverage preparation system can produce a range of beverage types including at least, but not limited to, filtered coffee, cappuccino, tea, chocolate and frothed milk, and wherein operation of the user interface is independent of the beverage type being dispensed.



**Title:** CARTRIDGE FOR THE PREPARATION OF BEVERAGES  
**Priority:** GB20030001710 20030124 US20030462538P 20030411 US20040763457 20040123  
WO2004GB00273 20040123

| Family: | Publication number | Publication date | Application number | Application date |
|---------|--------------------|------------------|--------------------|------------------|
|         | AU2004205386 AA    | 20040805         | AU20040205386      | 20040123         |
|         | BRPI0406877 A      | 20060103         | BR2004PI06877      | 20040123         |
|         | CA2514072 AA       | 20050721         | CA20042514072      | 20040123         |
|         | CA2514072 C        | 20120807         | CA20042514072      | 20040123         |
|         | CN1761604 A        | 20060419         | CN200480007369     | 20040123         |
|         | CN1761604 B        | 20100609         | CN200480007369     | 20040123         |
|         | DE602004001053 D1  | 20060720         | DE200460001053T    | 20040123         |
|         | DE602004001053 T2  | 20070412         | DE200460001053T    | 20040123         |
|         | DK1440913 T3       | 20060925         | DK20040250384T     | 20040123         |
|         | EP1440913 A1       | 20040728         | EP20040250384      | 20040123         |
|         | EP1440913 B1       | 20060607         | EP20040250384      | 20040123         |
|         | GB200301710 A0     | 20030226         | GB20030001710      | 20030124         |
|         | GB2397500 A1       | 20040728         | GB20030001710      | 20030124         |
|         | GB2397500 B2       | 20050323         | GB20030001710      | 20030124         |
|         | HK1065756 A1       | 20070112         | HK20040108566      | 20041101         |
|         | HK1065756 A1       | 20050304         | HK20040108566      | 20041101         |
|         | HK1065756 A3       | 20050304         | HK20040108566      | 20041101         |
|         | HK1065756 B        | 20070112         | HK20040108566      | 20041101         |
|         | JP2006516419 T2    | 20060706         | JP20060500237T     | 20040123         |
|         | JP4227169 B2       | 20090218         | JP20060500237T     | 20040123         |
|         | KR101073778 B1     | 20111013         | KR20057013572      | 20040123         |
|         | KR20050107747 A    | 20051115         | KR20057013572      | 20040123         |
|         | LT2005074 A        | 20060627         | LT20050000074      | 20050822         |
|         | MXPA05007863 A1    | 20051018         | MX2005PA07863      | 20040123         |
|         | NO20053939 A       | 20051021         | NO20050003939      | 20050823         |
|         | NO20053939 A0      | 20050823         | NO20050003939      | 20050823         |
|         | PL204651 B1        | 20100129         | PL20040377938      | 20040123         |
|         | PL377938 A1        | 20060220         | PL20040377938      | 20040123         |
|         | RU2005126702 A     | 20060610         | RU20050126702      | 20040123         |
|         | RU2337046 C2       | 20081027         | RU20050126702      | 20040123         |
|         | TW200420257 A      | 20041016         | TW20040101690      | 20040127         |
|         | TWI278298 B        | 20070411         | TW20040101690      | 20040127         |
|         | US2005034604 AA    | 20050217         | US20040763457      | 20040123         |
|         | US7328651 BB       | 20080212         | US20040763457      | 20040123         |
|         | WO04065257 A1      | 20040805         | WO2004GB00273      | 20040123         |

**Probable Assignee:** DOUWE EGBERTS BV KONINKLL

**Assignee(s):(std):** HAEGERMARCK JAN ANDERS ; HALLIDAY ANDREW ; KRAFT FOODS R AND D ; CARTER STEVEN ; KRAFT FOODS R AND D INC ; KRAFT FUDZ R U D INK

**Assignee(s):** KRAFT FOODS R AND D INC BAYERWALDSTRASSE 8 D 81737 MUNICH GERMANY ; D INC ; DOUWE EGBERTS BV KONINKLL ; KRAFT FOODS R AMP AMP

**Inventor(s):(std):** ANDERS HAGERMARCK JAN ; ANDERS HALLIDAY ANDREW CARTER ; CARTER STEVE ; HAEGERMARCK JAN ANDERS ; CARTER STEVEN ; ANDREW HALLIDAY ; HAGERMARCK JAN ANDERS ; JAN ANDERS HAEGERMARCK ; HALLIDAY ; HALLIDAY ANDREW ; HAGERMARCK JAN ANDERS ; KARTER STIVEN ; KHEGERMARK JAN ANDERS ; KHOLLIDEHJ EHNDJRJ ; STEVE CARTER

**Inventor(s):** HAGERMARCK JAN ; STEVEN CARTER ; HALLIDAY ANDREW CARTER STEVE HAGERMARCK JAN ANDERS

**Agent(s):** GRIFFITH HACK; MCFADDEN FINCHAM; OSLER HOSKIN AND HARCOURT LLP; RICHARDS BUTLER 20TH FLOOR ALEXANDRA HOUSE 16 20 CHATER ROAD HONG KONG; RICHARDS BUTLER; FITCH EVEN TABIN AND FLANNERY

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

**International class (IPC 8-9):** B65D81/00 A47J A47J31/00 A47J31/06 A47J31/24 A47J31/34 A47J31/36 A47J31/40 A47J31/44 A47J31/56 B65B29/02 B65D B65D81/34 B65D85/804 (Advanced/Invention); A47J31/24 A47J31/40 B65D81/00 (Advanced/Non-invention); A47J31/06 A47J31/24 A47J31/40 A47J31/44 B65D81/00 B65D81/34 B65D85/804 (Core/Invention); B65D (Subclass/Invention); A47J (Subclass/Non-invention)

**International class (IPC 1-7):** A47J31/00 A47J31/24 A47J31/40 B65D81/00 B65D85/804

**CPC:** A47J31/0673 A47J31/3695 A47J31/4407 A47J31/446 A47J31/4492 A47J31/56 B65D85/8043 A47J31/0642 B67D2001/0812

**European class:** A47J31/06C A47J31/06P4B A47J31/36B4D2 A47J31/40B A47J31/40H A47J31/44A1 A47J31/44A4 A47J31/44H A47J31/56 B65D81/00B3 B65D85/804B

**US class:** 426/115 99/279 99/279P 99/295 99/295S 99/323

[Classification Explorer](#)

**Cited documents:** WO9827854 A1, WO9717006 A1, WO9516377 A1, WO9507648 A1, WO8807472 A1, WO03065859 A3, WO03065859 A2, WO03059778 A3, WO03059778 A2, WO03039309 A1, WO03026470 A2, WO0228241 A1, WO0219875 A1, WO02092439 A2, WO02087400 A1, WO02085170 A3, WO02085170 A2, WO02082962 A1, WO02074661 A1, WO02074143 A2, WO0182760 A1, WO0160220 A1, WO0160219 A1, WO0158786 A1, WO0130218 A1, WO0115582 A1, WO0042891 A1, WO0028868 A1, USD489930 S1, USD479939 S1, USD475567 S1, USD461358 S1, USD460653 S1, USD459628 S1, USD452107 S1, USD443792 S1, USD423863 S1, USD419821 S1, USD255529 S1, US6758130 BB, US6698333 BB,



**Title:** OPTICAL ENCODER WITH RESINOUS CODE PLATE**Priority:** JP20030102970 20030407 EP20040008376 20040406

| Family: | Publication number  | Publication date | Application number | Application date |
|---------|---------------------|------------------|--------------------|------------------|
|         | ■ CN100561135 C     | 20091118         | CN200410043096     | 20040407         |
|         | ■ CN1538148 A       | 20041020         | CN200410043096     | 20040407         |
|         | ■ DE602004040002 D1 | 20130110         | DE200460040002T    | 20040406         |
|         | ■ EP1467186 A2      | 20041013         | EP20040008376      | 20040406         |
|         | ■ EP1467186 A3      | 20070418         | EP20040008376      | 20040406         |
|         | ■ EP1467186 B1      | 20121114         | EP20040008376      | 20040406         |
|         | ■ JP2004309302 A2   | 20041104         | JP20030102970      | 20030407         |
|         | ■ JP3851616 B2      | 20061129         | JP20030102970      | 20030407         |
|         | ■ US2004195331 AA   | 20041007         | US20040819149      | 20040407         |
|         | ■ US7374090 BB      | 20080520         | US20040819149      | 20040407         |

**Probable Assignee:** FANUC CORP**Assignee(s):(std):** FANUC CORP ; FANUC LTD**Assignee(s):** IMAI KEISUKE ; TERASHIMA HIROYA**Inventor(s):(std):** IMAI KEISUKE ; TERASHIMA HIROYA ; TERAJIMA HIROYA ; KEISUKE IMAI ; HIROYA TERASHIMA**Agent(s):** WUESTHOFF AND WUESTHOFF PATENTANWALTE PARTG MBB; BEYER ANDREAS; TAKEMOTO SHOJI; SUGIYAMA HIDEO; YUDA KOICHI; UOZUMI TAKAHIRO; STAAS AND HALSEY LLP**Designated states:** AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

**International class (IPC 8-9):** B29C45/00 B29C45/37 G01D5/34 G01D5/347 G06K7/10 G06K7/14 (Advanced/Invention);  
B29C45/26 (Advanced/Non-invention);  
B29C45/00 B29C45/37 G01D5/26 (Core/Invention);  
B29C45/26 (Core/Non-invention)

**International class (IPC 1-7):** B29C45/37 G01D5/34 G01D5/347 G06K7/10 G06K7/14

**CPC:** B29C45/0046 B29C45/263 B29L2011/00 G01D5/34707**European class:** B29C45/00H G01D5/347B L29C45/26L L29L11/00**US class:** 235/435 235/454 235/454P[Classification Explorer](#)**Cited documents:** US2002067688 AA, US2001003384 AA, JP8021745 A2, JP8021745, JP62265523 A2, JP62265523, JP62003616 A2, JP62003616, JP11287671 A2, JP11287671, JP11153453 A2, JP11153453, GB2178529 A1, EP0947807 A2,**Forward Citations:** WO12042568, US8387882, US2013008963, JP6057884, JP6018215, JP2015215168, JP2015114301, JP2014533159, EP1914523, CN104246447, CN104246447, CN104180827, CN104070785,**Abstract:**

An optical encoder, including a light emitting section; a light receiving section; and a resinous code plate disposed movably relative to the light emitting section and the light receiving section. The resinous code plate includes, on the plate face thereof, a plurality of tracks respectively provided with molded code-pattern surfaces different from each other, and a local structured-surface area formed between the tracks arranged side-by-side relative to each other, the local structured-surface area possessing a surface configuration different from the molded code-pattern surfaces of the tracks. The molded code-pattern surface of each of the tracks includes a flat surface area and an irregular surface area, adjacent to each other as seen in the extending direction of the track. The local structured-surface area is formed between the flat surface area of the molded code-pattern surface of one track and the irregular surface area of the molded code-pattern surface of another track arranged side-by-side relative to the one track. The irregular surface area of the molded code-pattern surface includes a first linear structure extending in a predetermined direction, and the local structured-surface area includes a second linear structure extending in a direction intersecting the first linear structure of the irregular surface area.

