

A METHOD AND APPARATUS FOR
COLOR CODED LIBRARY AND SHELVED MEDIA SYSTEM

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a method and apparatus for color coding the books of a library or other shelved media, such as, but not necessarily limited to video cassette recorder (VCR) tapes, cassette tapes, cassette disks (CDs), CD Rom cases or other types of shelved media.

Description of the Related Art

U.S. Patent No. 4,204,639 to Barber et al. discloses a label used for color coding, organizing and codifying files, tapes, cassettes and similar articles by file number. Each numeral of the file number has a unique, visually recognized color coded label that is also machine readable. A mis-filed article bearing these color coded labels stands out visually because it disrupts the otherwise consistent pattern of colors along the edges of coded articles employing the system.

U.S. Patent No. 4,329,131 to Barber discloses a process for labeling a system of file folders. Each label has a printed set of indicia that identifies the file. The printed indicia is machine readable. Selected portions of the machine readable indicia are visually identifiable via color coded labels that

correspond to the machine readable indicia.

Another U.S. patent, namely, U.S. Patent No. 4,580,815 to Barber discloses a composite strip adapted to receive a color coded labeling system for organizing files by file number.

U.S. Patent No. 4,585,253 to Beisswanger discloses an index system for file folders. The Beisswanger system utilizes four fields, a primary, secondary, and first and second tertiary fields. The primary field is four inches long, the secondary field is two inches long and the tertiary fields are each one inch long. Color coded indicia are placed in each field corresponding to an individual numeral of the file number. The variable length of the fields creates a funnel effect that leads the eye to the desired field.

U.S. Patent No. 4,856,820 to Kasprzak et al. discloses a machine-readable and human readable color coded pre-printed label. The machine readable and color coded sections of the label are aligned side-by-side in a machine-readable column and a color coded column. Each segment of the color coded column bears a single numeral of the file number and its corresponding color. The labels are supplied in sheet form. Each sheet has a plurality of labels. The OCR labels may be affixed to books in library stacks.

U.S. Patent No. 4,846,503 to Strauss discloses a method for obliterating undesired portions of a color coded label, leaving only information that is useful and desired.

SUMMARY OF THE INVENTION

The present invention is designed to solve the needs which remain in the art and relates to a method and apparatus for color coding library books and/or other shelved media systems. The invention comprises a plurality of color coded labels, with each label having a number of bands of colors. Preferably, when the label has been applied to a book or other media case, the bands of colors are displayed horizontally. Further, each color in a color band on the label is assigned a unique letter, or number, preferably so as to form part of and to correspond the alpha-numeric library code commonly utilized by public libraries, university libraries and the like to shelve, locate and identify books and other media. In a preferred embodiment of the invention, each label further includes a removable spacing tab along its lower edge which, when the label is mounted to the designated book or other media case, the bottom edge of the removable spacing tab is aligned with the bottom edge of the spine of the book or case. In this embodiment, upon affixing the label to the book or other media case, the removable spacing tab is separated from the label by a horizontal separation joint, thereby aligning the bottom edge of the remaining portion of the label at a fixed position relative to the bottom of the book. In alternative embodiments, the invention can comprises other means for precisely positioning the label on the spine of the book or media case so as to ensure

that when books or other media cases are put on a shelf, the position of the labels on adjacent books or media cases will collectively form a row of labels having a substantially precise, common and horizontally disposed upper and lower edge.

It is an object of the present invention to provide a method and apparatus for color coding library books and/or VCR tapes, cassette tapes, CDs, CD Rom cases, or any other type of shelf arranged media.

It is a further object of the present invention to provide a color coded system which forms color block patterns due to the substantially precise positioning of each color coded label on the spine of a book or media case.

It is a further object of the present invention to provide a method and apparatus for color coding a library and shelved media system which utilizes means, such as a removable spacing tab disposed along the lower edge of the color coded label, for precisely positioning the label on the spine of the book or media case, thereby ensuring substantially precise vertical label positioning on adjacent books or media cases.

Yet another object of the present invention is to provide a method and apparatus for color coding the books and other shelved media within a library which is capable of easily corresponding to and which can also include the alpha-numeric identification system(s) commonly utilized in public libraries,

university libraries, and the like.

It is also an object of the present invention to provide a labelling system for color coding the books of a library or other media systems, which can include other identification means, such as a bar code, pictures or symbols including icons or genre, and logos or other identifiers to designate the library or even one of various branches within a library network.

It is a further object of the present invention to provide a color coded label having colors printed thereon which are highly resistant to fading.

Further objects and advantages of the present invention can be found in the detailed description of the invention in the preferred embodiment, below, when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the nature of the present invention, reference should be had to the detailed description of the invention and the accompanying drawings in which:

Figures 1A, 1B, 1C and 1D diagrammatically illustrate a plurality of books stacked on a shelf, each having a color coded label thereon in accordance with the present invention so as to form visually discernable, color block patterns.

Figure 2 is a perspective view of a book or other media

case and a diagrammatical illustration of one color coded label before attachment of the label on the spine of the book.

Figure 3 is an illustration of the book or other media case shown in Figure 2 and further illustrating the color coded label affixed to the book.

Figure 3-A is an illustration of the book and label shown in Figure 3 with a clear, plastic sheet-like layer containing a ultra-violet ray (UV) blocking material disposed over the label.

Figure 4 is a front, plan view illustrating a sheet printed to contain a plurality of color coded labels according to the present invention, with each label being removable from the sheet.

Figure 5 is a front, plan view illustrating a color coded label according to the present invention in an alternative embodiment.

Figure 6 is a front, plan view illustrating a color coded label according to the present invention in yet another preferred embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention relates to a method and an apparatus for color coding library books and/or VCR tapes, cassette tapes, CDs, CD Rom cases, or any other type of shelf arranged media.

With reference to Figures 1A, 1B, 1C, and 1D, there are illustrated a plurality of books, two of which are identified as

books 10 and 12 in Figure 1-A, which are stacked on a shelf 14, such as might typically be found within a library or even a home. Although books are illustrated in the drawings, the present invention may be used on the storage cases for other types of shelved media. These media storage cases typically have spines which are visible to the library user when the case is on a shelf, and typically also include front and back covers, as does a book. The library shelf 14 extends on a shelf system, 15, seen in Figure 1-B, shelf 16 in Figure 1-C, and shelf 18 in Figure 1-D. As is common, the height of each book 10, 12 varies dependent upon a number of factors. In contrast, all the books are stacked on the shelf such that the front cover of one book is adjacent the back cover of another book. Each book also includes a spine, one of which is spine 20 for book 10.

In accordance with the present invention, each book or other media storage case found on the shelves of a library will have attached thereto a color coded label, 64, as seen in Figures 2 and 3. With respect to book 10, seen in Figure 1-A, the color coded label, 21, includes a plurality of bands 22, 24, 26, 28, 30, and 32, with each band having a color thereon. As illustrated, the bands are preferably horizontally disposed on the label, or more specifically, once the label is attached to the spine of the book or other media case. With respect to the example illustrated in Figure 1-A, the color on these bands (for books A - E) are shown as purple (22), white (24), red (26),

green (28), red (30) and white (32) bands. Each such band on a label 21, is similarly sized to that on the label on an adjacent book, so that when books affixed with such labels are stacked on a library shelf, 14, the result is the formation of color block patterns which permit a user to visually identify blocks of color. As a result, the present invention contemplates that books having block patterns of similar colors will be grouped together to designate for example, a particular general subject, such as history, or to designate more specific sub-categories, such as history - medieval times. Consequently, and as shown in Figure 1-A, there is a noticeable visual transition between the color coded label 21 on book E and the label on book F, because preferably, a color band on the lower region, such as band 30, changes from red on book E, to green on book F. That is, in a preferred embodiment, the color bands are arranged or stacked in a vertical orientation on the label, 21, so as to permit the reading of the label from top to bottom, and further, wherein the color band, 22, disposed at the top of the label 21, signifies a more general category, whereas the color band disposed at the bottom, such as 30, signifies a more specific identifier that will vary more than the other bands. As another example of how books having labels 21 with similar color block patterns might be grouped together, it is pointed out that books F, G, H and I seen in Figure 1-A might have been authored by a person named Gary Smith. Hence, a similar color coding on the

label on each spine of these books is noted. In contrast, the adjacent books J, K and L on shelf 14, also seen in Figure 1-A, may have been authored by Jorge Smith. If book K were accidentally mis-filed and placed between books F and G, the blue color band in region 30 would be visually identifiable between the two green color bands 30 on books F and G. Accordingly, a librarian, library assistant or file assistant could easily visually recognize a book which is not properly placed in the library. The present system enables the librarian to easily remove those books and place them in the correct order.

From the foregoing, it should be clear that colors which appear on a label 21 of the present invention correspond to a particular code. Preferably, the color code utilized will have a correspondence to the alpha-numeric identification systems, meaning the number and letter identifiers, which are commonly utilized by most libraries, whether public or university. In this regard, set forth below is a color chart which provides one system of linking a certain color with an alpha-numeric, number or letter which forms the system of most libraries. In the color chart, below, it is noted for instance that the number 2 and the letter A are associated with a solid blue color and that the letter N is associated with a stripe. In one embodiment, this stripe extends horizontally throughout the horizontally disposed color band. Of course, the stripe could be diagonally

disposed rather than horizontally disposed. Also, the color chart set forth below simply provides an example of one type of designation of the alpha-numeric numbers and letters with certain colors.

COLOR CHART			
Number	Alpha	Color Solid	Stripe
0	C-P	Red	(P)
1	B-O	Green	(O)
2	A-N	Blue	(N)
3	E-R	Pink	(R)
4	F-U	Purple	(U)
5	K-X	Yellow	(X)
6	M-Z	Black	(Z)
7	I-V	Orange	(V)
8	D-Q	Brown	(Q)
9	H-S	Gray	(S)

As diagrammatically illustrated in Figures 1-A, 1-B, 1-C and 1D, the color coding system is unique and is visually pleasing, even if the books are stacked completely horizontally or if certain books are horizontally disposed and other books are stacked vertically such as a four high library stack.

With reference now to Figure 2, there is illustrated a book or other media case, 60, having spine, 62, upon which is partially mounted a color coded label 64 according to the

present invention. Preferably, the label 64 has an adhesive on its backside opposite the imprinted label side 66, which causes the label to adhere to spine 62 of the book. In this regard, a printable sheet, indicated by reference numeral 120 in Figure 4, which includes a plurality of labels removably formed thereon with an adhesive backing, can be utilized for the imprinting of the color coded labels according to the present invention. It will be appreciated that a suitable computer can be programmed with appropriate software or to otherwise run a computer program for the generation of each color coded label 64. As for the printer that is operably connected to such a computer for the imprinting of the label, it is preferred that a high quality printer be utilized, such as one capable of performing thermal color transfer, or a color laser printer, or other device which can output printed colors that are resistant to fading. Alternatively, and as illustrated in Figure 3, each color coded label 64 may include a covering of a clear plastic material 110 having an ultraviolet ray blocker or UV blocking effect. Thus, for certain printed inks or printed labels, the clear plastic UV blocking cover 110 can be adhered over the top of color coded label 64 so as to minimize the fading of the colors over time. Since it is costly to color code an entire library, the fading of colors is an expensive loss for the library system. When the colors fade, it may be difficult for a library user or librarian to distinguish between similar colors (for example, red and

pink). With the UV block clear plastic layer, the fading of the colors is arrested. Other print systems do not fade when exposed to UV light for an extended period of time.

Referring now to Figure 2, the color coded label 64 of the present invention preferably includes means 50 for precisely positioning the label 64 on the spine 62 of the book or media case 60, thereby ensuring substantially precise positioning of the label 64 on the vertical space of the spine 62 relative to adjacent books or media cases. In a preferred embodiment, the means 50 for positioning the label 64 on the spine 62 comprise a removable spacing tab 68 disposed along the lower edge 70 of the imprinted portion 66 of the color coded label. In this embodiment, the spacing tab 68 is removably attached to imprinted portion 66 via a horizontal separation joint which may consist of a series of horizontally disposed perforations, a horizontal tear crease or even a plurality of vertical tear through strips. Other types of separation joints commonly utilized with paper or other printable sheets may be utilized. Continuing with this preferred embodiment, the spacing tab 68 includes a bottom edge 74 which is intended to be aligned with the bottom edge 76 of book 60. Bottom edge 76 is also the bottom edge of spine 62. The color coded label 64 is properly spaced on spine 62 by aligning lower edge 74 of tab 68 with the bottom edge of spine 62. Label 64 is then attached to spine 62. Immediately thereafter or subsequent to attaching flap regions

80 and 82 to the front and back covers of book 60 (as shown by arrows 84, 86), spacing tab 68 is separated from label 64. In this embodiment, the color coded label 64 may also include a visual alignment indicator, 55, such as a diamond symbol, disposed at a center from each vertical edge thereof, so as to assist with the centering of the label 64 on the spine 62 prior to its attachment thereon. Alternatively, the means 50 for precisely positioning the label 64 on the spine 62 of the book or media case 60 may comprise a measuring device, such as a ruler, which is utilized to measure a selected distance, such as generally about one-half inch or so, from the bottom edge 78 of the book, and also a marking device, to mark a horizontal line along the spine of the book at that pre-selected distance from bottom edge 78. Once the horizontal line has been marked on spine 62, the bottom edge of label 64 can be aligned therewith and attached to the spine 62. If desired, an apparatus for standing the book or media case 60 in an orientation which presents its spine 62 for the attachment of a label 64 might also be utilized.

In the preferred embodiment, the color coded label 21 of the present invention will be structured and disposed to include for display a common alpha-numeric identifier found on most books within a library. With reference to Figure 2 and 3, the common alpha-numeric identifier might be displayed in a generally, horizontally readable form, such as is shown on label

portion 92. As shown in the color band chart, below, for the label depicted in Figures 2 and 3, this color band 92 is preferably white so as to facilitate the reading of this identifier. It should be pointed out, however, that this color band 92 could instead be colored, for example, to include an uncommon pastel color, such as lavender, salmon, etc., and further, imprinted with an icon or genre as well so as to correspond to alternative methods used by libraries to group books and/or even to signify that a particular group of books is in another language.

COLOR BAND CHART FOR FIGS. 2 AND 3

0	Red
R-001.94-HO	White
0	Red
1.	Green
0	Gray
9	Purple
MA	White (Main Library)

In addition to the generally horizontal printing of the alpha-numeric library code for a book 60 onto color band region 92, the alpha-numeric library code is also preferably printed vertically on the color coded label 64, as is about to be explained. For example, if the main grouping identifier or

library code for the book 60 is 001.94, then the each of the numbers in the code, meaning, 0, 0, 1., 9, and 4 are preferably also printed in vertical orientation within each of the associated identifying color bands, namely, 90, 94, 96, 98, and 99. These color bands 90, 94, 96, 98 and 99 are further color coded red, green, gray and purple, respectively, which comply with the color assignments given these alpha-numeric characters in the color chart presented earlier.

In addition to the foregoing, the color coded label 64 can include other identification means. For example, as seen in Figures 2 and 3, the label can include a color band region 100, which might be a trailer segment on the label 64, for the presentation of additional characters. As one example, color band region 100 may be imprinted to include characters such as "MA" to permit a library to identify in what library branch the book is properly located. In these Figures, the designation "MA" has been chosen to signify that the book 60 is properly located in the main branch of a library. Alternatively, color band region 100 might also include other identifying information such as the trailing, more detailed alpha-numeric portions of the common library book codes, seen in Figure 5. However, other identification means could easily be utilized and imprinted on the color coded label 64, in a manner which would not interfere with the reading of the color coding. For example, and with reference to Figure 6, the label 64' might be sized to be

relatively larger, such as generally about 1 and 1/2 inches in height by generally about 3 to 4 inches in length, so as to provide sufficient room for providing other identification means. These might include the logo, 200, of a particular library, a bar code 210 to facilitate the checking out of a book by a library patron and/or the tracking and inventory control of books within a library, pictures or symbols such as an icon 220 or genre, and if desired, a date stamp 230 to signify when the label was printed, or even a purchase order number.

Referring now to Figure 4, there is illustrated a printable sheet 120 having a plurality of labels formed thereon which have been imprinted so as to be color coded in accordance with the present invention, along with an index section 150 imprinted thereon. All of the labels on sheet 120 are preferably separated from each other by vertical cuts, such as cut 126, which separates label 122 from 124, and also by a number of horizontal cuts. Further, a number of labels have been removed from the sheet 120 illustrated in Figure 4. The labels which have been removed are preferably identified in the index section 150 with a check mark being placed next to labels 001.503 ME - MA, 001.5092 MA-MA, 001.51 BA-MA and 001.503 ME-MA. In an alternative embodiment, an index section could instead be disposed on the removable spacing tab 68 on the label. It should be noted that with respect to the embodiment shown in Figure 4, however, the positioning of the index section 150

corresponds with the spatial positioning of the missing label. Hence, for label 124, the index shows 001.444 in the middle column as the second entry from the bottom of the column. This corresponds with label 124 which is the position in the second column on the sheet in the second row from the bottom of the sheet. This particular indexing section 150 on sheet 120 enables the librarian or other clerk, who mounts each label onto the book, to check off the label after it has been affixed. Thereafter, the sheets can be mounted in three (3) ring binders and a listing is provided showing which labels have been accurately affixed to the proper book in the library. Sheet 120 has a releasable or weak type layer 121 which does not adhere to the adhesive on the backside of each label.

Since many modifications, variations and changes in detail can be made to the described preferred embodiment of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

Now that the invention has been described,



What is claimed is:

1. In combination with a plurality of books stacked on a plurality of book shelves, each book having a spine attached and affixed between a front and a back cover of said book, said plurality of books stacked on said plurality of shelves with each respective spine facing a user and front and back covers of adjacent books being proximate each other, a color coded library system comprising:

a plurality of color coded labels, each label having (n) number of horizontally disposed color bands, each color band assigned to a unique letter or number and said letter or number being part of an alpha-numeric library code such that n number of color bands on a particular label is a subset of m available colors, each of said m available colors substantially equivalent to respective letters and numbers forming said alpha-numeric library codes, each label imprinted with a unique alpha-numeric library code both horizontally and vertically, at least a portion of said vertically imprinted unique alpha-numeric code being imprinted as a single letter or number over the corresponding assigned color band;

each label having a body portion with an adhesive on a backside of said body opposite an imprinted side of said body which reveals said n horizontal color bands and vertical and horizontal unique alpha-numeric code;

each label being mounted to a designated book by



alignment of a bottom edge thereof at a pre-determined distance from and in substantially parallel relation to a bottom edge of said spine of said book;

each label being substantially permanently attached on said spine via said adhesive; and

a plurality of labels mounted on a plurality of adjacent, shelved books and thereby forming color block patterns by the uniformly placed labels mounted at predetermined positions on said plurality of shelved books, said color block patterns formed by a plurality of similar color bands on adjacent shelved books to form a visually identifiable block of similar colors.

2. A color coded library system as recited in claim 1 further comprising a trailer segment disposed adjacent a lowermost one of said color bands, said trailer segment structured and disposed as part of said label to provide space for additional identification means, said additional identification means including at least a bar code.

3. In combination with a plurality of books stacked on a plurality of book shelves, each book having a spine attached and affixed between a front and a back cover of said book, said plurality of books stacked on said plurality of shelves with each respective spine facing a user and front and back covers of adjacent books being proximate each other, a color coded library system comprising:

a plurality of color coded labels, each label having



(n) number of horizontally disposed color bands, each color band assigned to a unique letter or number and said letter or number being part of an alpha-numeric library code such that n number of color bands on a particular label is a subset of m available colors, each of said m available colors substantially equivalent to respective letters and numbers forming said alpha-numeric library codes, each label imprinted with a unique alpha-numeric library code both horizontally and vertically, at least a portion of said vertically imprinted unique alpha-numeric code being imprinted as a single letter or number over the corresponding assigned color band;

each label having a body portion with an adhesive on a backside of said body opposite an imprinted side of said body which reveals said n horizontal color bands and vertical and horizontal unique alpha-numeric code;

each label having a removable spacing tab along a lower edge of said imprinted side of said body, said spacing tab being removably affixed to said body via one of horizontal perforations, a horizontal tear crease and a plurality of vertical tear-through strips;

each label being mounted to a designated book by alignment of a bottom edge of said spacing tab with a bottom edge of said spine of said book, each label being substantially permanently attached on said spine via said adhesive, and a plurality of labels mounted on a plurality of adjacent, shelved



books forming color block patterns by the uniformly placed labels mounted at predetermined positions on said plurality of shelved books, said color block patterns formed by a plurality of similar color bands on adjacent shelved books to form a visually identifiable block of similar colors; and, a clear layer of UV blocking plastic having an adhesive which attaches to said imprinted face.

4. In combination with a plurality of books or media cases stacked on a plurality of shelves, each book or case having a spine, a front cover plate and a back cover plate, each respective spine for said plurality of stacked and shelved books or case facing a user when front and back covers of adjacent books or cases are proximate each other, a color coded library system comprising:

a plurality of color coded labels each having n bands of horizontally disposed color bands, each color in said color band assigned to a unique letter or number forming a part of an alpha-numeric library code, each label imprinted with a unique alpha-numeric library code for each said book or case and at least a portion of said imprinted unique alpha-numeric code displayed as an assigned color in said color band;

each label having an imprinted face, an adhesive coated backside and a lower edge along said imprinted face, said n horizontal color bands forming said imprinted face;

each label having a removable spacing tab along said



lower edge which is removably affixed via a horizontal separation joint to said imprinted face portion of said label;

each label being mounted to a designated book or case by alignment of a bottom edge of said spacing tab with a bottom edge of said spine of said book or case, said label placed at a predetermined location on said book or case with respect to said shelf after removal of said tab, thereby forming color block patterns which visually identify blocks of similar colors and groups of similar books or cases; and, a clear layer of UV blocking plastic having an adhesive which attaches to said imprinted face.

5. The combination as claimed in claim 4 wherein said unique alpha-numeric library code is imprinted both horizontally in a single color band and at least partially vertically, at least a group of unique letters or numbers displayed atop respective assigned colors.

6. A method of color coding and stacking a plurality of books stacked on a plurality of book shelves, each book having a spine, a front cover and a back cover, each respective spine for said plurality of stacked and shelved books facing a user when front and back covers of adjacent books are proximate each other, the method comprising the steps of:

assigning a color to each letter and number forming a part of an alpha-numeric library code;

providing a plurality of color coded labels each



having n bands of horizontally disposed color bands;

providing each label with a removable spacing tab along a lower edge of said label, said spacing tab being removably affixed via a horizontal separation joint to said label;

imprinting each color coded label with a unique alpha-numeric library code corresponding to a respective book and at least a portion of said imprinted unique alpha-numeric code displayed as an assigned color in said color band;

adhering each label on a respective book corresponding to said unique alpha-numeric library code by (a) aligning a lower edge of said spacing tab with a lower edge of said spine of said book, and (b) removing said spacing tab from said label by separation along said separation joint; and,

forming color block patterns with aligned color bands visually displaying books having similar characteristics when said books are stacked adjacent each other in accordance with said alpha-numeric library code on said book shelves.

7. A method of color coding as claimed in claim 6 including the step of printing said unique alpha-numeric codes on a plurality of color coded labels in sheet form.

8. A method for color coding as claimed in claim 7 including covering said color coded label with a UV blocking clear plastic shield which adheres to said book spine and said label after affixation of the label on the spine.



9. A method for color coding as claimed in claim 8 including providing an index on said sheet, said index including a list of all unique alpha-numeric library codes corresponding to respective labels found on said sheet prior to adherence to said book spine, and including the step of marking individual entries on said list when the corresponding label is adhered to said book spine.