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P. S. MORTON

2,988,824

ROTATING TYPE COLOR SELECTOR

Filed July 27, 1959

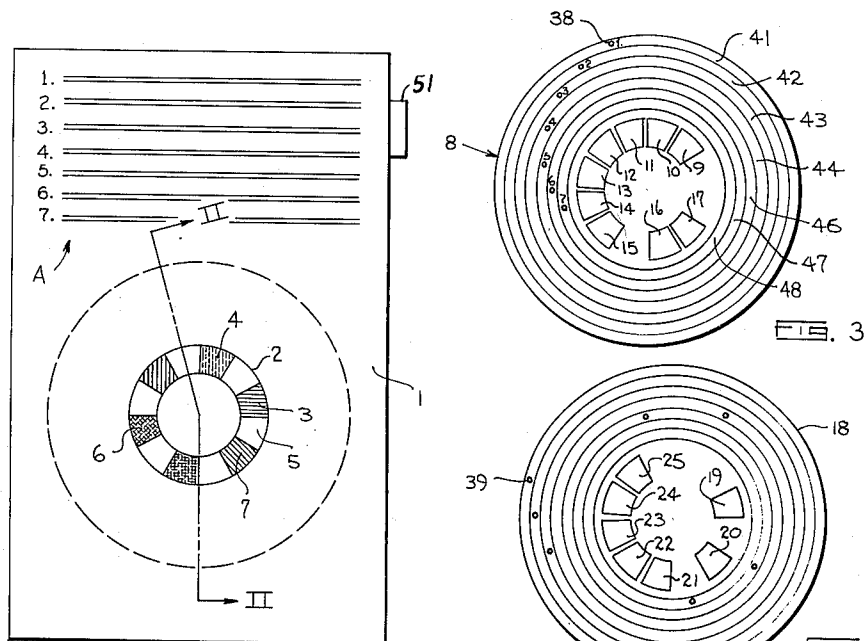


Fig. 1

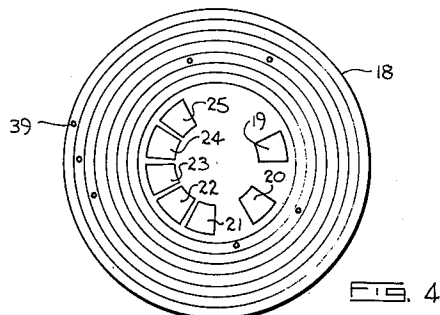


Fig. 4

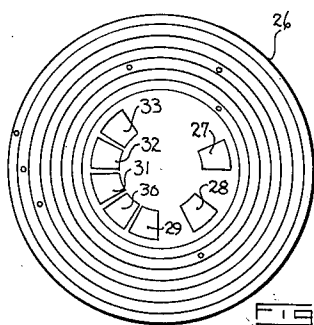


Fig. 5

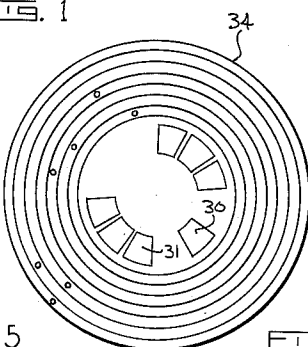
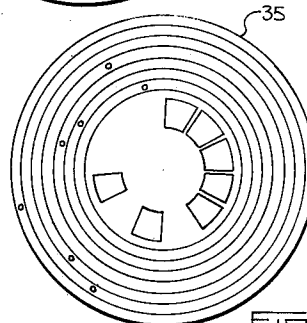


FIG. 6



19.7

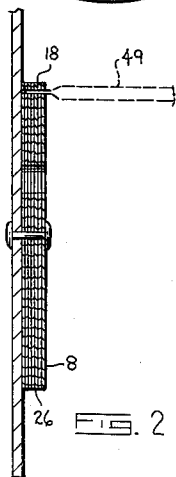


Fig. 2

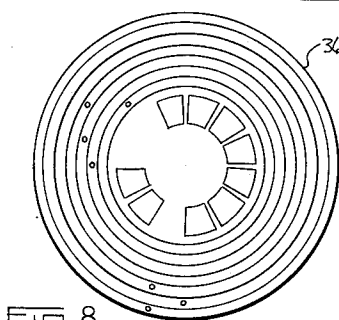


Fig. 8

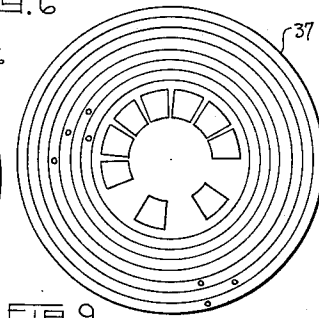


FIG. 9

INVENTOR.

PAUL S. MORTON

BY

Woochams Blanchard & Flynn
ATTORNEYS

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ROTATING TYPE COLOR SELECTOR

Paul S. Morton, 5131 Meadowlark Lane, Portage Township, Kalamazoo County, Mich.

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2 Claims. (Cl. 35—28.3)

This invention relates to a color selecting device and it relates particularly to a device for indicating colors which will bear certain preselected relationships to each other in different patterns and groupings as desired.

It has long been common practice in various kinds of painting and decorating establishments to make suggestions to customers with respect to the colors which will look well together. However, insofar as I am aware, where this service has been sufficiently detailed to be of any real value, it has either been carried out solely by the judgment of an experienced person in the establishment or by the use of fairly complex apparatus. Inasmuch as a great many color groupings are selected by amateurs and selected without benefit of experienced counselling, the facilities of such establishments are often not fully utilized. As a result many non-harmonious and otherwise undesirable color combinations are sometimes chosen by such amateurs on the basis solely of their own immediate impressions and when applied, for example, to the redecorating of a residential interior, the colors are found, when the job is completed, to be entirely unsatisfactory. Often, even though the establishment selling the paint has nothing at all to do with the choice of colors, nevertheless the unpleasant effect of the bad color choice creates discontent on the part of the customer and much of this reflects at least to some degree on the establishment.

To meet this problem and to improve their services to customers, many establishments selling paint or otherwise serving the interior decoration of residences, and other similar uses, have devised a variety of charts for indicating pleasing color combinations. These charts are frequently large, complex and difficult to handle. Moreover, it is difficult to make a quick selection of aesthetically satisfactory color combinations therefrom. Therefore, their usefulness is severely restricted.

It has therefore long been desired to provide a device which will indicate pleasing color combinations, will do so in groups involving different numbers of colors and yet which can be manufactured sufficiently inexpensively that it can be utilized by a paint selling or decorating establishment as a means of demonstration to potential customers:

The objects of the invention are:

(1) To provide a device for indicating pleasing groups of colors upon selection of a single dominant color by the operator;

(2) To provide a device, as aforesaid, which can be easily operated by persons inexperienced in color selection;

(3) To provide a device, as aforesaid, which can be readily adjusted to indicate different numbers of colors for a single grouping, such as colors in groups of two, groups of three, groups of four and similar;

(4) To provide a device, as aforesaid, whose operation will be obvious and can accordingly be operated by any person of average ability without special instruction;

(5) To provide a device, as aforesaid, which will be sufficiently rugged to withstand ordinary use over an appreciable period of time.

Other objects and purposes of the invention will be apparent to persons acquainted with devices of this general type upon a reading of the following disclosure and inspecting the accompanying drawings.

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In the drawings:

FIGURE 1 is a plan view of the back panel of a device embodying the invention.

FIGURE 2 is a cross-sectional view taken on the line II—II of FIGURE 1 with the selecting disks in place.

FIGURE 3 is a detail of the upper disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 4 is a detail of the second disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 5 is a detail of the third disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 6 is a detail of the fourth disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 7 is a detail of the fifth disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 8 is a detail of the sixth disk of the embodiment illustrated in FIGURES 1 and 2.

FIGURE 9 is a detail of the seventh disk of the embodiment illustrated in FIGURES 1 and 2.

General description

In general, the device constitutes a plurality of superposed, centrally pivoted disks having a plurality of windows therethrough. Said windows are arranged on a single radius on such a circumferential pattern that varying arrangements of the disks with respect to each other will provide a plurality of predetermined sights through the entire group of disks. All of said disks are rotatably mounted on a back-card on which is arranged a plurality of color displays, said various displays being arranged in a circle on a radius equal to the radius of said windows.

Thus, by a predetermined arrangement of said disks with respect to each other, certain sights may be arranged therethrough in such a manner that when one of such sights is located over a selected key color on the back-card, the other sights will be on one or more colors as determined by the arrangement of said disks to blend harmoniously with said key color.

It is well known that the colors blue, yellow and red are the so-called primary colors and the colors green, orange and purple are the so-called secondary colors. It has been suggested to arrange these colors at equally spaced intervals around a circle, or a so-called color wheel, in the following order, blue, green, yellow, orange, red and purple. Conventionally, the color wheel also has one or more colors between each of the primary and secondary colors which colors are combinations thereof, such as blue-green, yellow-green, etc. Obviously, the color wheel can contain as many colors between the primary and secondary colors as is desired, such as blue-blue-green, blue-green and blue-green-green, etc.

It has been found that certain combinations of colors are aesthetically pleasing to at least certain groups of people and, therefore, it is desirable that a color selecting device be capable of providing such pleasing combinations so as to enable a purchaser to select appropriate color or colors for his purposes. The invention provides means indicating such color combinations and these combinations for convenience in the following description, will be defined now. It will be understood that when referred to hereinafter, the term "complementary harmony" shall mean colors which are directly opposite from each other on a color wheel, such as green and red, yellow-green and red-purple, etc. The term "split complementary harmony" means any color on a color wheel and the two colors to the left and to the right of its true complement, such as blue, yellow-orange and red-orange (orange being the true complement of blue). The term "double complementary harmony" means four colors, namely, colors to the left and to the right of each of two complementary colors, such as blue-green, blue-purple, red-orange and yellow-orange (blue and orange being complemen-

tary). The term "triad harmony" means any three colors which are equally spaced from each other around the color wheel, such as red, yellow and blue. The term "analogous harmony" refers to three colors on the color wheel which contain a common primary color, such as green, yellow-green and yellow (yellow being the common primary color). The term "mutual complementary harmony" means an analogous harmony plus a color directly across the color wheel from the central color of the mutual complement. Further, the complement to the analogous harmony could be split to provide a "split mutual complementary harmony."

Detailed description.

Referring now to a particular embodiment selected to illustrate the invention and illustrated in the several drawings, it will be recognized that a specific description of this particular embodiment is for illustrative purposes only and is in no sense limiting.

Referring first to FIGURE 1 there is shown a back-card 1 on which appears a color wheel 2 having marked thereon a plurality of color segments 3, twelve color segments being here shown for illustrative purposes. Said segments are arranged with complementary colors substantially diametrically opposite each other and in whatever number and shades of color as may be desired. In the present embodiment, and for discussion purposes hereinafter, it will be assumed that the area 4 indicates a selected shade of color and the areas 6 and 7 indicate two colors in triad harmony with each other and with the color appearing in the area 4. The other areas, including the unshaded areas of which one is indicated at 5, are also provided with colors and/or varying shades of colors as desired to represent the colors and/or varying shades of colors on a twelve-color color wheel.

Suitable identifications "A" may be provided on said back-card 1 and said identifications are correlated with varying types of harmonious color groupings. For example, identification "1" may refer to monochromatic color, "2" may refer to complementary harmony, "3" may refer to split complementary harmony, "4" may refer to double complementary harmony, "5" may refer to triad harmony, "6" may refer to analogous harmony and "7" may refer to mutual complementary harmony.

Now turning to the disks superimposed on the back-card 1, the disk 8 (FIGURE 3) is pivoted concentrically with the annular zone 2 and has a plurality of sight openings 9 to 17, inclusive, which are also arranged on the same radius around said center of rotation and with respect to each other and with respect also to the annular color zone 2 on the back-card 1.

A disk 18 is also centrally pivoted concentric with disk 8 and it has a plurality of sight openings 19 to 25, inclusive, arranged therein on the same radius with respect to each other and in a circumferential arrangement with respect to each other as set forth hereinafter.

The next disk 26 is similarly centrally pivoted concentric to the disk 8 and has a plurality of sight openings 27 to 33, inclusive, arranged on the same radius around said center and on the same radius as the annular zone 2. Further disks 34, 35, 36 and 37 are all located under the concentric with the preceding named disks, all having a plurality of sight openings on the same radius as the radius of the color zone 2 to provide a plurality of selected sights there through to the back-card when arranged in selected positions with respect to each other on their common pivot center.

Said disk 8 also has a plurality of small alignment openings 38, here seven openings to correspond to the seven identifications A, arranged radially outwardly of the sight openings 9 to 17, one alignment opening being on each of seven annular zones 41, 42, 43, 44, 46, 47 and 48 of progressively smaller radii. Disk 18 has a similar plurality of alignment openings 39 arranged radially outwardly of its sight openings 19 to 25, inclusive, each of said align-

ment openings 39 being arranged respectively on annular zones of the same radii as the alignment openings 38 of disk 8, but arranged in a different circumferential pattern as shown. The remaining disks 26, 34, 35, 36 and 37 each have further and similar alignment openings arranged radially outwardly of their respective groups of sight openings, the alignment openings on each of said disks all being respectively arranged on annular zones of the same radii as the alignment openings 38 and 39 but arranged in different circumferential patterns with respect to each other.

The front surface of the outermost disk 8 is marked with suitable indicia related to the identifications A and identifying the respective alignment openings. Thus, the radially outermost alignment opening may be related to the monochromatic identification "1" so that when all of said radially outermost alignment openings are aligned a single sight opening will be provided. The alignment openings on successively smaller radii will be related to the identifications "2," "3," etc. The disks are of the same diameter and may be arranged in any desired order with respect to the back-card so long as the outermost disk has indicia identifying the alignment openings and relating them to the identifications A.

The sight openings of said several disks are arranged so that when the alignment openings on a given radius are all vertically aligned with respect to each other, certain predetermined ones of the sight openings will be aligned with respect to each other in order that the user of the selector can see through said sight openings certain selected ones of the color areas arranged on the back-card 1. Thus, in the particular embodiment shown herewith said various openings are arranged as follows:

(a) When all of the alignment openings on the outermost zone 41 are vertically aligned, then only one set of sight openings will be aligned with respect to each other, all the others interfering in such a manner that only a single sight through the group of disks is provided. In this way, it is possible to view at one time only one portion of the annular color area 2.

(b) When all of the alignment openings on the next-to-the-outermost zone 42 of said disks are vertically aligned, then two sight openings will be aligned through the several disks and will be aligned in such a position that the viewer can see complementary colors on the annular color zone 2. All of the disks may then be moved together pivotally around their common center and the pairs of openings will then reveal pairs of complementary colors according to the pivotal position of said disk around a common center with respect to the back-card 1.

(c) When all of the alignment openings on the third zone 43 are vertically aligned with respect to each other, then three sight openings are provided through the several disks and said openings are arranged for permitting the user to view the three colors of a split complementary harmony and by rotation of all disks as a unit, varied split complementary harmony colors may be viewed.

(d) When the alignment openings in the fourth zone 44 are vertically aligned, then four sight openings are provided through the several disks and said openings are arranged for viewing four colors of a double complementary harmony and by rotating in this position all disks as a unit, varied color combinations may be viewed.

(e) When the alignment openings in the fifth zone 46 are vertically aligned, three sight openings are provided, different than the group of three aforesaid. This group of three sight openings is arranged for viewing a triad harmony. Again by rotating the disks as a unit, various color combinations may be viewed.

(f) When the alignment openings in the sixth zone 47 are vertically aligned, then still another group of three sight openings are provided, different than either of the groups of three aforesaid. This group of three sight openings is arranged for viewing an analogous harmony.

Again by rotating the disks as a unit, varied color combinations may be viewed.

(g) When the alignment openings in the seventh zone 48 are vertically aligned, then a group of four sight openings, different from that obtained from the grouping of zone 44, is obtained. This group is arranged for viewing a mutual complementary harmony. Again by rotating the disks as a unit, various color combinations may be reviewed.

A stylus 49 (FIGURE 2) is provided having a point of such size as to pass readily through all of the alignment openings. Said stylus may conveniently, if desired when not in use, be supported by a suitable holder 51 (FIGURE 1) carried on the back-card 1.

Operation

In operation, the user places the stylus through one of the alignment openings in the outermost disk, here the disk 8, presses it lightly toward the back-card 1 and using the stylus causes the top card to rotate about its center. As it does so, the stylus enters the alignment opening on the same radius of the next lower disk, here the disk 18 and the two disks then rotate together. Following this the stylus finds and enters the corresponding opening in the third disk, here the disk 26, and so on until it has found and entered all the openings in the corresponding zones of the remaining disks. Thus, all of said disks are locked together in a predetermined pattern and the sight openings therethrough are aligned as desired. Continuing to use the stylus, the disks may then be rotated about their common centers to reveal the colors in the annular zone 2 as desired.

Thus, for example, if it is desired to select colors in comprising a "triad" harmony, the user will place the stylus in the alignment opening in the fifth zone 46 from the outside. The user then presses said stylus lightly toward the back-card 1 and rotates the outermost disk 8 about its center. The user continues to so press and rotate until the stylus has found and entered all of the alignment openings on said zone 46 in all of said disks, whereupon the sight openings in the disks are so aligned as to provide three, and only three, sights therethrough and said three sights are arranged so that in any position with respect to the annular color zone they reveal the desired color relationships.

Other relationships indicated in the identifications A appearing on the back-card 1 may be quickly found by placing the stylus into the alignment opening of the upper disk corresponding to the number appearing along side the desired designation and pressing said stylus lightly toward the back-card and simultaneously rotating said top disk around its center, continuing such operation until the stylus has found and entered all of the aligned openings on the selected zone.

It will be recognized that the manufacture of this apparatus is extremely inexpensive inasmuch as all of the disks can be provided by a simple die-cutting operation and the only assembly step is the single pivoting means provided for pivotally fastening all of said disks onto the back-card.

Therefore, the provision of the device according to the invention is extremely inexpensive, and its operation as above described is sufficiently simple that the device herein disclosed and described is capable of achieving the several objects of the invention above set forth.

Although the above-mentioned drawings and description refer to one particular, preferred embodiment of the invention, it is not my intention, implied or otherwise, to eliminate other variations or modifications of the invention unless specifically stated to the contrary in the hereinafter appended claims.

What is claimed is:

1. A color selecting device for selecting color harmonies, comprising in combination: a back card having a plurality of colored zones thereon, said zones being arranged in a circle around a center point; a plurality of overlapping discs overlaying said back card and mounted for rotation with respect to each other around said center point, each of said discs having a plurality of openings therethrough arranged in a circle of the same radius as that of said zones so that said zones may be viewed through said openings, said openings being arranged so that aligning said discs in selectable, predetermined relative positions with respect to each other will align certain of said openings so as to permit viewing of selected color zones; said discs each having a series of alignment openings arranged at radially spaced and circumferentially offset intervals thereon, corresponding alignment openings in the discs being the same radial distance from said center point so that said discs may be selectively brought into any one of several possible relative positions with respect to each other as to expose selected color zones by rotating said discs to bring corresponding ones of said alignment openings into alignment.

2. A color selecting device for selecting color harmonies comprising in combination: a back card having a plurality of colored zones thereon, said zones being arranged in a circle around a center point; a plurality of overlapping discs overlaying said back card and mounted for rotation with respect to each other around said center point, the number of discs being equal to the number of color harmonies which the device is to provide, each of said discs having a plurality of openings therethrough arranged in a circle of the same radius as that of said zones so that said zones may be viewed through said openings, said openings being arranged so that aligning said discs in selectable, predetermined relative positions with respect to each other will align certain of said openings so as to permit viewing of selected color zones; said discs each having a series of alignment openings equal in number to the number of discs and arranged at radially spaced and circumferentially offset intervals thereon, corresponding alignment openings in the discs being the same radial distance from said center point so that said discs may be selectively brought into any one of several possible relative positions with respect to each other as to expose selected color zones by rotating said discs to bring corresponding ones of said alignment openings into alignment.

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