May 19, 1931. W. GRUMBACHER 1,805,520

COLOR ARRANGEMENT

Filed Feb. 7, 1929

Fig. 1

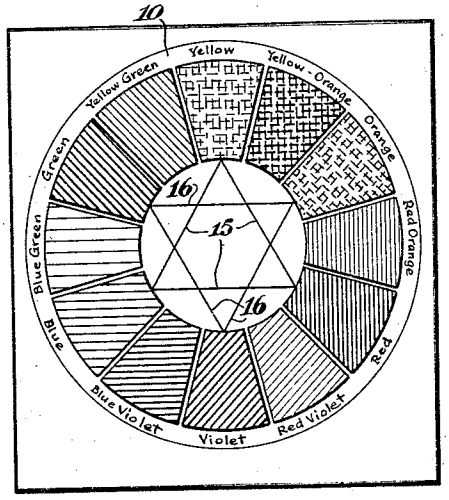


Fig. 2

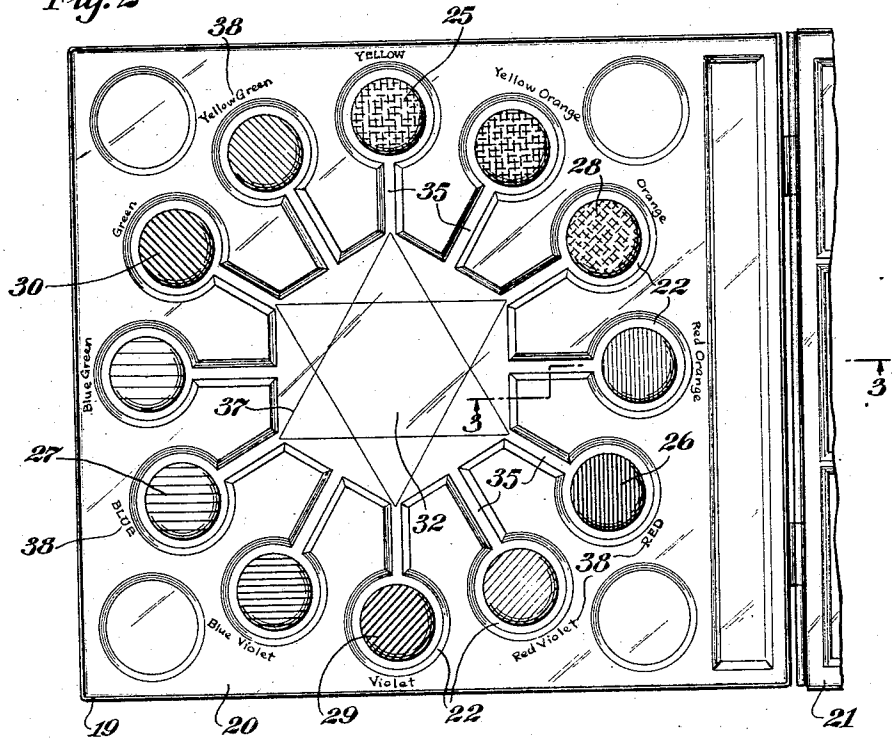
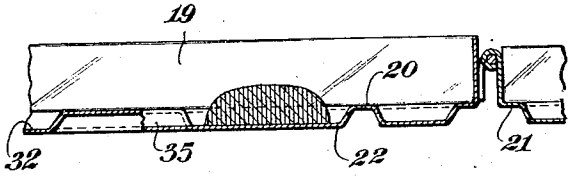


Fig. 3



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UNITED STATES PATENT OFFICE

WALTER GRUMBACHER, OF NEW YORK, N. Y., ASSIGNOR TO M. GRUMBACHER, OF NEW YORK, N. Y., A COPARTNERSHIP COMPOSED OF MAX GRUMBACHER AND WALTER GRUMBACHER

COLOR ARRANGEMENT

Application filed February 7, 1929. Serial No. 338,070.

My present invention relates generally to color indications, and from one of its aspects involves the novel arrangement of color indications for paint mixing purposes, and from another aspect involves paint discs or portions arranged in accordance with such indications, and from still another aspect the association of paint discs so arranged with such indications.

The general object of my invention is directed to facilitating the selection of colors to produce the desired effect.

A still further object of my invention is the association with the arrangement for facilitating the selection of colors, of means to facilitate the actual mixing of the colors.

In one of the specific embodiments herein disclosed, I illustrate the employment of my invention with a color chart, the indications taking the form either of a group of word color indications or a group of colored patches, or of both, the group or groups being circularly arranged with the corresponding indications on the two groups in registry, as will be more fully set forth hereinafter.

In another of the specific embodiments herein disclosed, I illustrate the employment of my invention with a paint box or paint holder, in which the paint pellets themselves form the color indications, so that the necessity for recourse to any source of information other than the paint pellets themselves and their arrangement is eliminated.

For the attainment of these objects and such other objects as may hereinafter appear or be pointed out, I have illustrated embodiments of my invention in the drawings, wherein:—

Fig. 1 shows a color chart embodying one phase of my invention;

Fig. 2 is a top plan view of a further embodiment of my invention; and

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

In Fig. 1 of the drawings I illustrate a color chart embodying one phase of my invention. In this figure, I show my color indications as of two characters, namely, indications such as "yellow", "orange" and the like, all arranged in the outer circle 10, and of colored patches also circularly arranged concentrically with the circle 10 with each color patch in registry with the corresponding word color indications; e. g., the word "yellow" is in registry with the yellow patch or area.

It will be observed upon viewing this figure that both the color patches and the word indications are circularly arranged, progressing clockwise in the illustrated embodiment of Fig. 1, and the description of the color pellets will be understood as applying equally well to the work color indications.

I have arranged the colors in the order shown in the drawing because of certain advantageous results which are attained thereby, and in the drawings it will be observed that the primary colors, "yellow", "red" and "blue" are arranged at the apices of an equilateral triangle 15, having as its center, the center of the circle about which the color indications are grouped. So also, the intermediate colors, "green", "orange" and "violet", are arranged at the apices of a similar triangle 16, a duplicate of the first-mentioned triangle 15 except that it is in reversed position, the two triangles intersectiong to form a six-pointed star.

Another advantage of this color indication arrangement, and particularly of either the actual association therewith of the six-pointed star or of the employment of my invention with a six-pointed star idea in mind, is that, taking "yellow" as an example, it will be found that the triangle having one of its apices at "yellow" will have its other two apices directed to two colors which, when mixed, give "violet", or which, when mixed with the "yellow" give neutral gray. This applies equally well to all portions of the chart. While the six-pointed star formed by the triangles 15 and 16 have been described as present in Fig. 1 of the drawings and as serving, in this connection, to increase the convenient use of the arrangement herein disclosed, it will be understood that the actual physical use of this six-pointed star is not essential to the broader aspect of this phase of my invention and that once the association of the arrangement of the colors in connection

with such a figure is fully understood and appreciated, that the idea of the employment of a six-pointed star will itself be sufficient, and in time even its mental association can be dispensed with.

Between each primary and its adjacent intermediate color on either side, is a color which is formed by mixing together the aforementioned primary color and intermediate color.

As a result of this arrangement of color indications, it will be observed that any indicated color will, when mixed with the color indicated diametrically opposite, give neutral gray. Furthermore, the arrangement is such that, starting with "yellow", for example, (which might be termed the highest or lightest color) and progressing clockwise, the colors gradually become darker until a point diametrically opposite "yellow" is reached, namely, "violet", (which is the darkest or deepest of the colors), and as the clockwise movement is continued the colors gradually become lighter until "yellow" is again reached.

Again, starting with "orange", which is generally referred to by artists as the warmest of the colors, and progressing clockwise through "violet", the coldest color is reached at "blue green", and this also is diametrically opposite the warmest color, namely, "orange", and as the progression is continued the colors gradually become warmer until "orange" is again reached.

While I have herein referred to the colors as arranged clockwise to give the results pointed out, it will be understood that the results will be attained as effectively even when the arrangement of the colors is reversed.

In Fig. 2 of the drawings, I have shown an embodiment of my invention wherein the color arrangement of the chart of Fig. 1 is associated with an actual paint holder or box and with which optionally may also be used the color word indications of the chart of Fig. 1, the actual paint pellets corresponding in all respects to the color patches or areas of Fig. 1.

The paint box comprises the bottom 20 provided with the upstanding flange 19 thereabout and the cover or closure member 21. The bottom 20 has a series of depressions or concavities 22 formed therein, in any preferred or desired manner, as by a stamping operation, where the box is made of sheet metal. These depressions are twelve in number and are arranged in a circle. They are intended to receive colors or paints in the form, for example, of pellets, the pellets 25, 26 and 27 representing the primary colors "yellow", "red" and "blue", for example, and the pellets 28, 29 and 30 representing the intermediates, "orange", "violet" and "green", for example. The arrangement of the pellets as to color answers generally to the arrangement of the color patches in Fig. 1. Centrally of this circle of depressions 22 is arranged a central depression 32 to which paint may be removed by the brush from the chambers 22 and in which the paints may be mixed.

In order to facilitate this operation channels 35 connecting the depressions 22 and the central chamber 32 may be provided. When it is desired to form a neutral gray color of, for example, "yellow", the "yellow" and the diametrically opposite color "violet" are mixed in the central chamber 32 and in this connection the channels 35 are found of advantage.

While this central chamber may be of any desired or preferred shape, I have found it to be of advantage to give it the hexagonal outline shown in the drawings, for the assistance which said arrangement gives in selecting the colors for mixing. For example, any two diametrically opposed apices of this hexagon point to colors which will give neutral gray. Any three alternate apices also point to colors that give neutral gray. The progression of colors from warmest to coldest and from lightest to deepest described in connection with Fig. 1 is also maintained here.

I have illustrated in connection with Fig. 2 of the drawings the employment of a six-pointed star 37 and of the word color indications 38, although it will be understood that neither of these are essential to this phase of my invention, although it may be found useful under the circumstances. These serve the same function in connection with the embodiment of Fig. 2 as was described in connection with the embodiment of Fig. 1.

One of the important features of the embodiment of Fig. 2 is that it eliminates the necessity that a user consult a color chart or any other source of information as to the mixing of the colors. The paints themselves, because of their inherent colors, coupled with the particular arrangement herein specified, give all the information that is necessary, and the embodiment herein of the other features set forth are primarily to facilitate the mixing of the colors.

While I have described my invention of Fig. 2 as associated with a paint container of the character set forth, and the paint in the form of pellets received in depressions in such container, it will be understood that the broad phases of my invention do not necessitate the employment of such specific construction.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is:—

1. A paint box comprising a plate having a series of depressions arranged in a circle, color pigments in said depressions, a central mixing chamber formed in said plate and

channels connecting each of said depressions with said central mixing chamber.

2. A paint box comprising a plate having a series of depressions arranged in a circle, color pigments in said depressions, a central mixing chamber formed in said plate, said chamber being hexagonal in shape and so arranged that any two diametrically opposed apices of the hexagon point to colors which when mixed will give neutral gray and any three alternate apices also point to colors which when mixed will give neutral gray.

3. A paint box comprising a plate having a series of depressions arranged in a circle, color pigments in said depressions, a central mixing chamber formed in said plate, said chamber being hexagonal in shape and so arranged that any two diametrically opposed apices of the hexagon point to colors which when mixed will give neutral gray and any three alternate apices also point to colors which when mixed will give neutral gray and channels connecting each of said depressions with said central mixing chamber.

In witness whereof I have signed and sealed this specification.

WALTER GRUMBACHER.