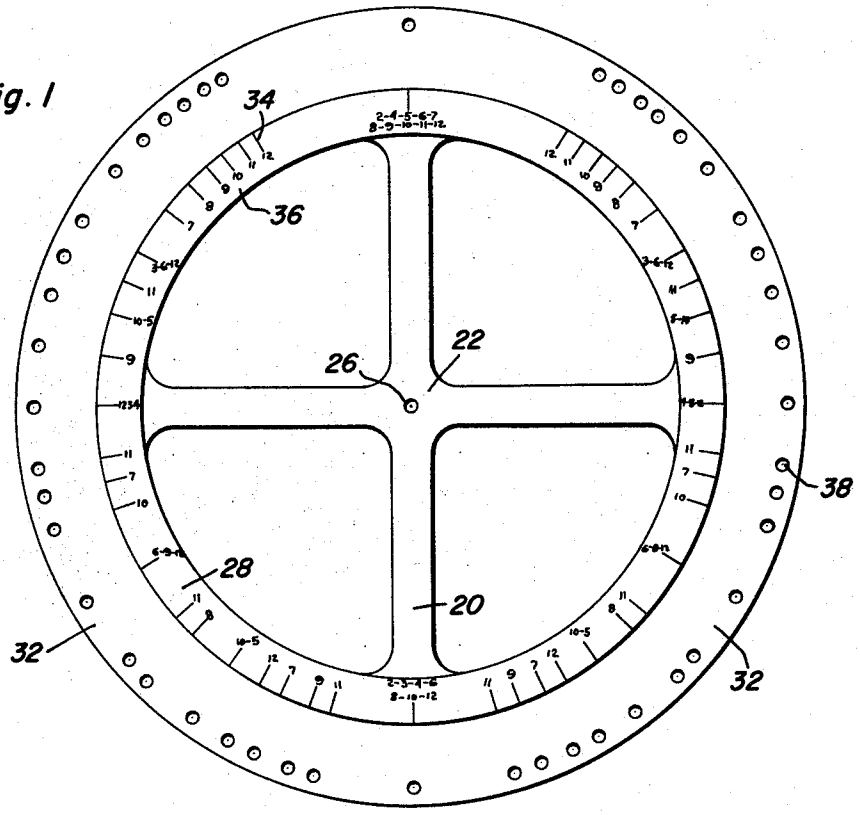
May 25, 1965 C. JOHNSON 3,184,864

COLOR BLEND PROPORTION INDICATING DEVICE

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Fig. 1



Amt. of first color	Amt. of Second color	Locating point to be used on color Index wheel
12	0	12
11	1	12
7	5	12
10	1	11
9	2	11
8	3	11
7	4	11
6	5	11
9	1	10
7	3	10
8	1	9
7	2	9
5	4	9
7	1	8
5	3	8
6	1	7
5	2	7
4	3	7
5	1	6
4	1	5
3	2	5
3	1	4
1	1	6

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Fig. 6

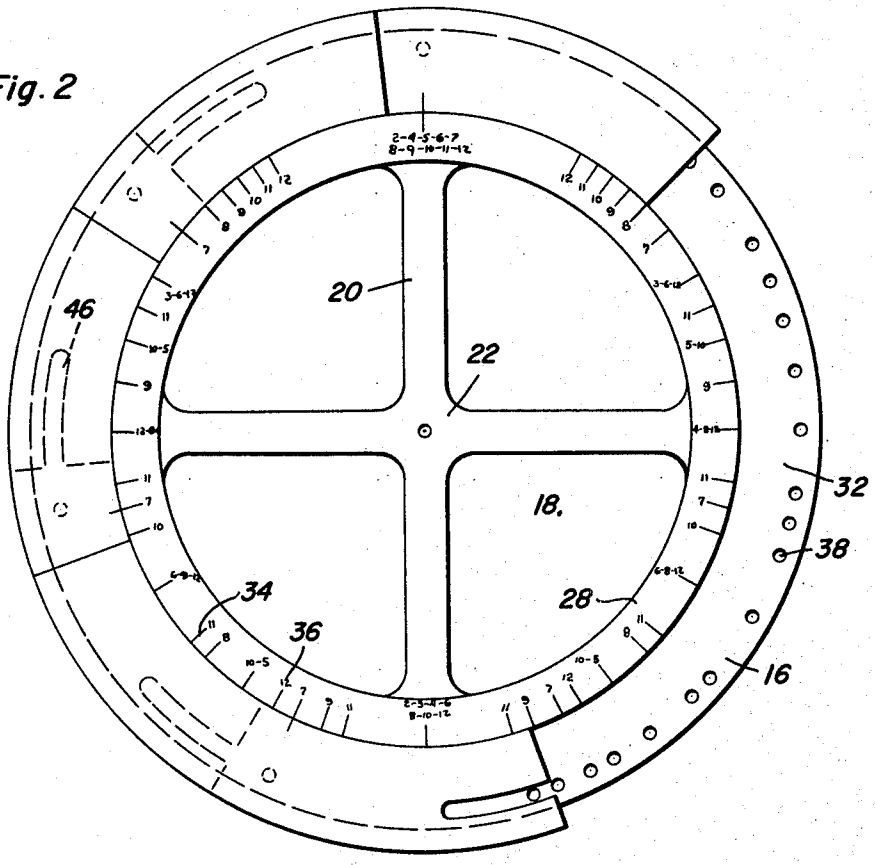
Clarence Johnson
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

COLOR BLEND PROPORTION INDICATING DEVICE

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Fig. 2



use three of each color		to blend two colors
1	3	4
2	3	5
1	4	5
1	5	6
3	4	7
2	5	7
1	6	7
3	5	8
1	7	8
4	5	9
2	7	9
1	8	9
3	7	10
1	9	10
5	6	11
4	7	11
3	8	11
2	9	11
1	10	11
5	7	12
1	11	12
0	12	12

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Fig. 6A

Clarence Johnson
INVENTOR.

BY Clarence O'Brien and Harvey B. Jackson
Attorneys

May 25, 1965 C. JOHNSON 3,184,864

COLOR BLEND PROPORTION INDICATING DEVICE

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Fig. 3

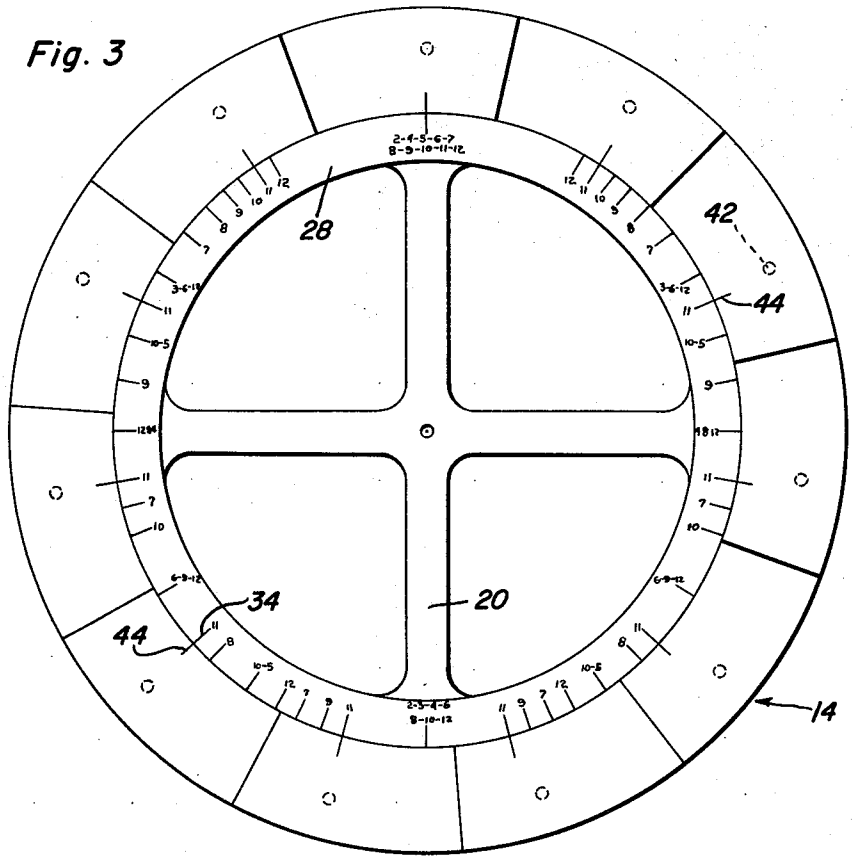


Fig. 4

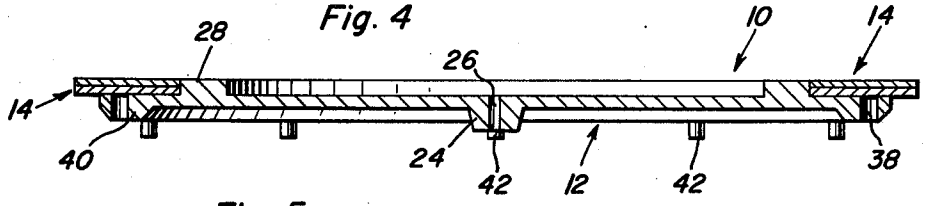
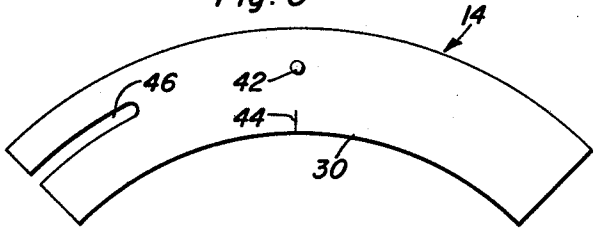


Fig. 5



Clarence Johnson
INVENTOR.

BY Johnson & O'Brien and Harvey B. Jackson
Attorneys

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COLOR BLEND PROPORTION INDICATING DEVICE

Clarence Johnson, Milford, Mich.
(1343 Milford Road, Highland, Mich.)

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1 Claim. (Cl. 35—28.3)

The present invention generally relates to the blending of colors and/or color producing materials and more particularly to a device for effectively indicating the actual shade or color which will result from a mixing of specific amounts of two or more shades or colors without the necessity of actually mixing these shades, colors or materials.

As will be appreciated, situations frequently arise in painting of all types wherein the obtaining of a shade or color not available is either necessary or desired and would require the blending of two or more colors. In the past, it has been necessary to arrive at the desired shade or color by actual experimentation, that is an actual mixing of different proportions of the different colors. However, with the present invention, it is now possible to obtain a true indication of the color which will result from a mixing of selected proportions of other colors without the necessity of actually mixing the colors. This is to be accomplished by mounting various color segments, containing the colors to be mixed in the proportions desired, in a predetermined pattern on a wheel or disc with the wheel or disc being subsequently rotated at a speed so as to effect a visual blending of the colors with the blended colors assuming the shade or color which would result from an actual blending of these colors, thus quickly and with little effort advising the user of the device of the proportions needed to be actually blended thus avoiding any undesirable necessity of experimenting with the actual paints.

Accordingly, it is a primary object of the present invention to provide a device for quickly finding the proportion of each color or color producing material or pigment necessary to arrive at a desired color.

Another object of the present invention is to provide a sturdy though simple device to ascertain the desired proportions.

Likewise, the present invention contemplates the use of a plurality of arcuate color segments with the segments containing the colors to be blended or representing proportionate quantities of color producing materials to be blended, the blending being accomplished by arranging the segments in a predetermined pattern on a wheel and subsequently spinning the wheel so as to effect a visual blending of the colors or color producing material.

Additionally, an object of the present invention is to provide a device wherein a substantially unlimited range of different shades can be easily arrived at with the exact proportion of each color needed to attain the shade being readily ascertainable.

Likewise, it is an object of the present invention to provide a device for indicating color blend proportions which can be used by those having little or no knowledge of color blending with the desired color being obtained experimentally in a manner which requires no actual mixing of pigments or paints or color producing materials, thus avoiding any accidental mixing of the wrong proportions.

These, together with other objects and advantages which will become subsequently apparent, reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the

accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a plan view of the mixing or index wheel comprising the present invention;

FIGURE 2 is a view similar to FIGURE 1 with a plurality of color segments arranged on the wheel with the segments being arranged so as to divide the ring into seven equal parts;

FIGURE 3 is another view similar to FIGURE 1 with the color segments being arranged thereon so as to divide the wheel into eleven equal parts;

FIGURE 4 is a cross-sectional view through the index wheel having the color segments positioned thereon;

FIGURE 5 is a view of one of the color segments; and

FIGURE 6 and 6–A illustrate a chart which is used to indicate which locating points are to be used for various proportions of two shades or colors or color producing materials.

Referring now more particularly to the drawings, reference numeral **10** generally indicates the color blend proportion indicating device. The device **10** includes both a circular disc or mixing wheel **12** and a plurality of colored segments **14** to be mounted thereon.

The circular disc **12**, preferably made of clear plastic, has a substantially flat upper surface **16** with an open central portion **18** crossed by spokes **20** forming an enlarged hub **22** which in turn has a boss **24** projecting downwardly from the bottom surface thereof. This enlarged boss **24** and the vertical hole **26** therethrough are provided so as to facilitate a rapid spinning of the wheel **12** in a conventional manner for purposes which shall be pointed out presently.

Provided on the upper surface **16** peripherally about the open central portion **18** is an unwardly projecting stabilizing ring or rib **28** which is intended to function both as a means for facilitating the location of the color segments **14** on the disc **12** and to also assist in the stabilization of these segments **14**.

It is intended that the color segments be evenly spaced about the wheel **12** with the inner arcuate edge **30** abutting against the raised ring **28** and with the lower surface of the segments **14** resting on the portion of the upper surface **16** of the disc outwardly of the ring **28**, this portion of the upper surface **16** also being referred to as the shoulder **32**.

In the placing of the color segments **14** about the wheel **12** it is essential that they be properly located so as to insure a true visual blending of the colors, and accordingly, a series of index lines **34** are provided on the ring **28**, each index line **34** having one or more index numbers **36**. These index numbers **36**, ranging from 2 to 12, arranged about the wheel **12** so as to divide the wheel into a corresponding number of portions, that is the 2's are located so as to divide the wheel into two equal parts, the 3's are located so as to divide the wheel into three equal parts, and so on all the way up to the numbers 12 which divide the wheel into twelve equal parts. As will be appreciated from FIGURES 1, 2 and 3, such an arrangement necessitates, in some instances, the provision of more than one index number **36** with a single location or index line **34**. Further, while the wheel has been illustrated as being proportioned in from two to twelve portions as the preferred embodiment, the present invention is not specifically intended to be so limited with the use of a lesser or greater number also being contemplated.

Positioned outwardly from the ring **28** are a plurality of locating holes **38** through the shoulder **32** with each locating hole **38** corresponding to an index line **34**. With attention being specifically directed to FIGURE 4, it

will be noted that the wheel 12, at the outer portion of the shoulder 32, is provided with a depending rigidifying rib 40, the locating holes 38 extending therethrough.

The locating holes 38 are specifically provided so as to secure the color segments 14 to the wheel 12 with the segments 14 having a depending tab 42 thereon which is of a size so as to be received within a locating hole 38 thus insuring the proper orientation of the segment with the desired index line 34. Also, to provide an additional means for properly orientating each color segment 14, a small guide line 44 is provided thereon extending inwardly from the arcuate edge 30 and radially aligned with the locating tab 42 so as to form a continuation of the designated index line 34 as will be noted in FIGURES 2 and 3. Additionally, it is contemplated that each color segment 14 be provided with an elongated slot 46 extending inwardly from one edge thereof with this slot 46 being circumferentially aligned with the locating holes 38 upon the segment 14 being positioned on the shoulder 32, thus enabling the access to the holes 38 by the tab 42 of an adjacent segment 14, this being especially essential when the wheel is being divided into a fairly large number of portions. It will be noted from FIGURES 2 and 3 that the color segments 14 are arranged so as to overlap the slotted end of an adjoining segment 14, such an overlapping, in some instances, possibly not concealing the entire slot 46.

As mentioned supra, it is essential to good color blending that the color segments be arranged about the wheel 12 in a manner so as to expose equal portions of each segment 14. Accordingly, a guide chart 48, illustrated in FIGURES 6 and 6–A, is provided with the chart setting forth the proper locating holes or points 38 to be used when blending predetermined portions of two colors, for example, when blending seven portions of a first color and five portions of a second color the seven segments 14 of one color and the five segments 14 of the other color are to be each located with the tabs 42 thereon projecting through a locating hole 38 corresponding to the index number 12, the segments 14 of both colors being alternated as much as possible, thus providing a smooth blending of the colors upon a rapid rotation of the wheel. It will be appreciated that if the 7 and 5 blend does not produce the desired shade or tone, another blend such as 6 of a first color and 5 of the second color can be tried. Additionally, it will be appreciated that the resulting blend from the 7 and 5 mixture can be actually mixed with the blended color constituting a first color for blending with a new second color, thus resulting in being able to obtain an almost unlimited range of shades and colors.

While not specifically set forth, it will be appreciated that the segments 14 are to be constructed of any suitable material either having the colors impregnated therein or painted thereon.

From the foregoing, the significance of the present invention is considered to be readily apparent. By the provision of a relatively simple device having a predetermined number of equally divided groups of areas thereon for the reception of colored segments of two or more colors, it is possible upon a rotation thereof to effect an authentic blending of these colors such as would result from an actual mixing of the pigments or paints or color producing materials represented by these color segments, it being possible to obtain an almost unlimited range of shades and tones while avoiding the tedious task of actually physically mixing or blending the colors. It will be appreciated that the waste resulting from the use of improper proportions of the colors in actual mixing is also avoided. The significant advantages of the invention are accomplished by the use of a circular disc having an upstanding annular stabilizing ring surrounded by an outwardly extending flat shoulder with the arcuate color segments being positioned on the shoulder about the ring at their predetermined points defined by holes for the reception of the segment tabs with these holes corresponding to index lines and index numbers provided on the annular ring. For purposes of convenience a handy chart is also provided so as to immediately ascertain the proper locating points or holes to be used. Further, in reference to this chart, it will be noted that in those instances where the color segments are to be provided in a one to one ratio, three segments of each color are to be used with the segments being located in the locating holes corresponding to the index number 6.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

A color blend proportion indicating device consisting of a circular wheel, a raised circular rib projecting from one side thereof, said side being substantially flat aside from said rib, said rib being spaced inwardly from the periphery of said wheel so as to form a circular supporting shoulder, and a plurality of segments positioned on said shoulder about said wheel, said segments being arcuate in shape and conforming to the circular shoulder, the inner edge of each segment being engaged against the rib, indicia on said wheel, said indicia being located so as to proportion said shoulder into a plurality of separate groups of equal length portions, each group corresponding to a different predetermined number of segments with the portions of each group forming a circular pattern, the number of segments used determining the group to be used, a plurality of mounting and locating holes through the shoulder, one hole corresponding to each indicium, a single depending tab fixed to each segment and received within a predetermined one of said holes, the segments each being of a length equal to or greater than the length of the equal length portions of the group which includes the next greater number of portions than the largest group which contains portions which when halved will be no smaller in length than the length of the portions of the largest group of the plurality of groups, said segments being of a length equal to or less than the length of the equal length portions of the smallest group, said segments being overlapped in the formation of any group having portions of a different length than the segments.

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JEROME SCHNALL, *Primary Examiner.*

GEORGES NINAS, JR., *Examiner.*