

(No Model.)

4 Sheets—Sheet 1.

L. W. YAGGY.
COLOR CHART.

No. 556,077.

Patented Mar. 10, 1896.

Fig. 1.

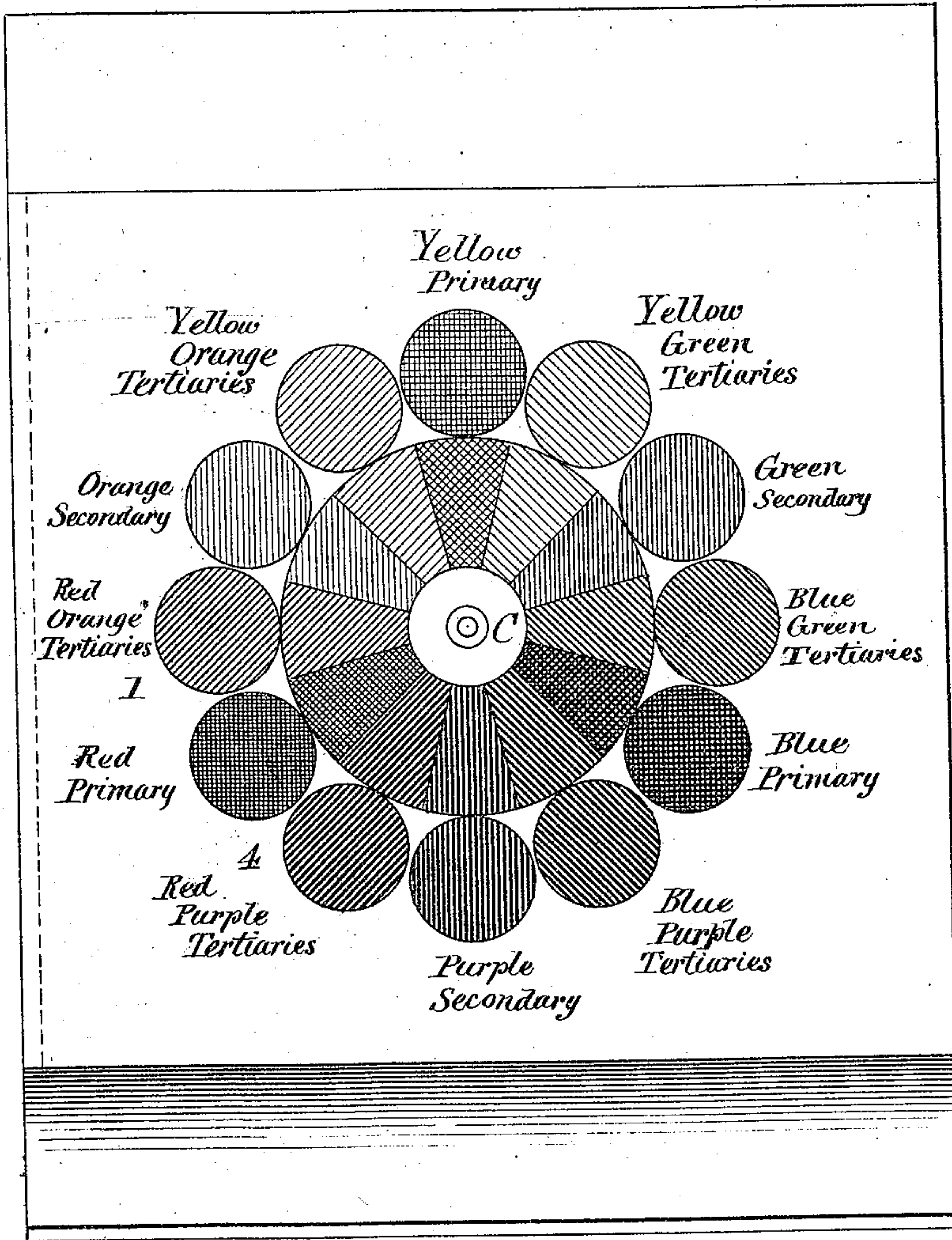
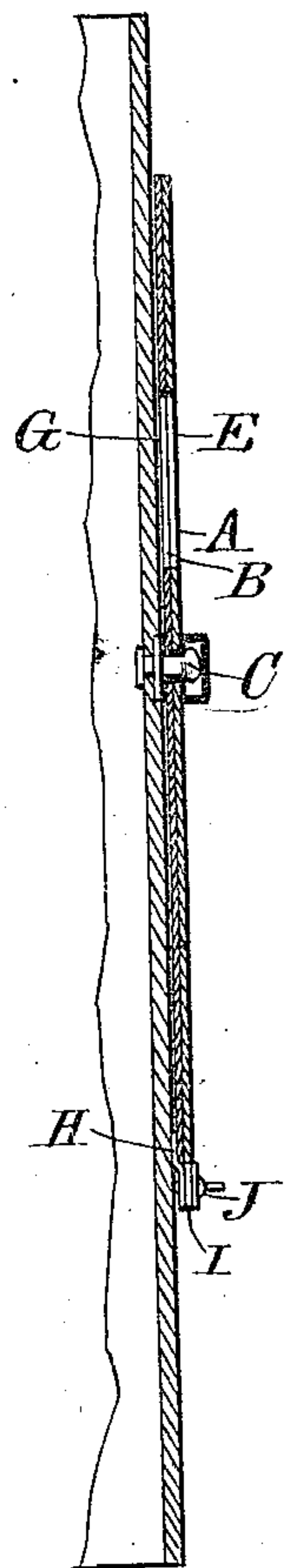


Fig. 2.



Witnesses:

H. G. Strong,
A. A. Murray

Inventor:

Levi W. Yaggy,
By Coburn V. Thacher,
Attys.

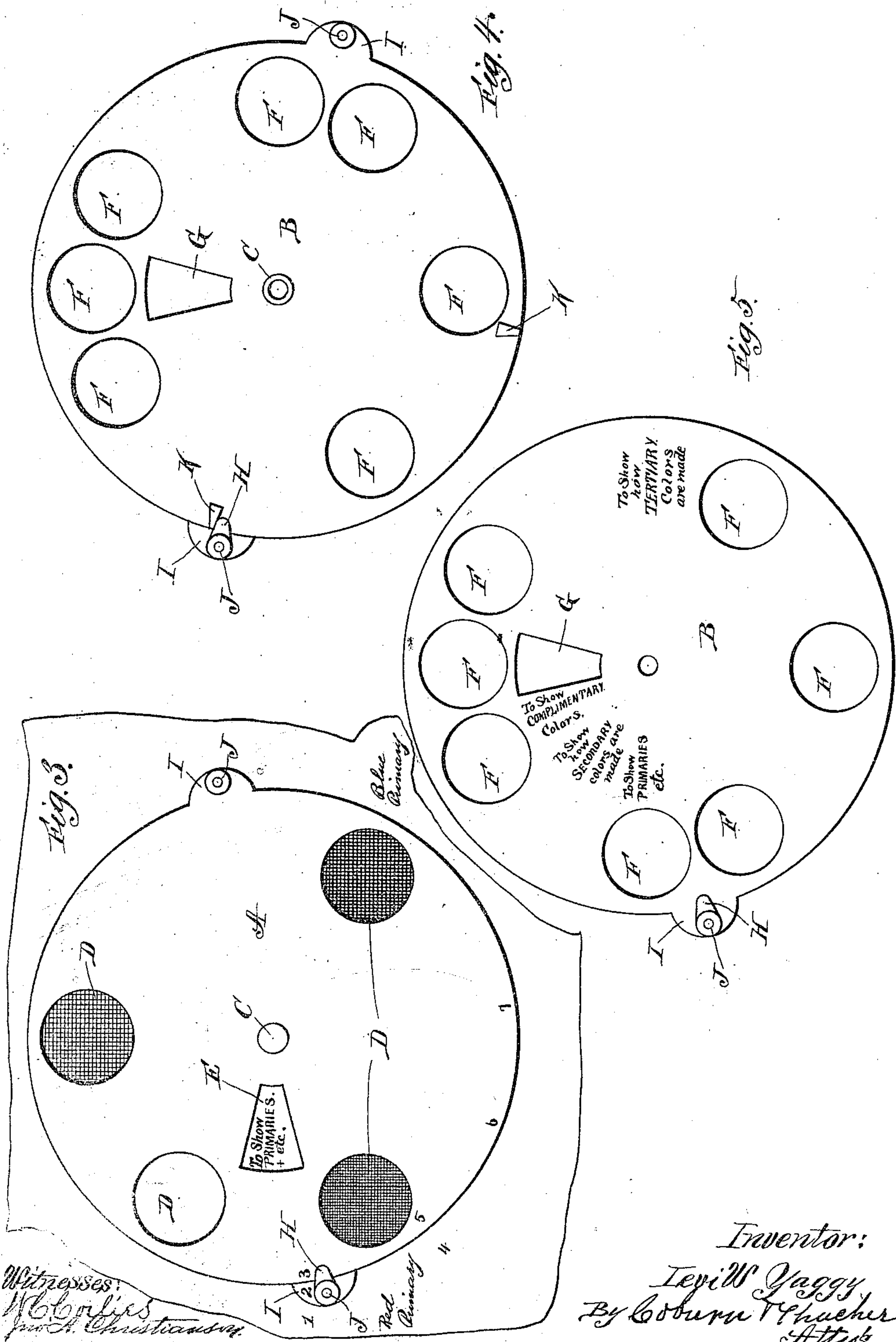
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4 Sheets—Sheet 2.

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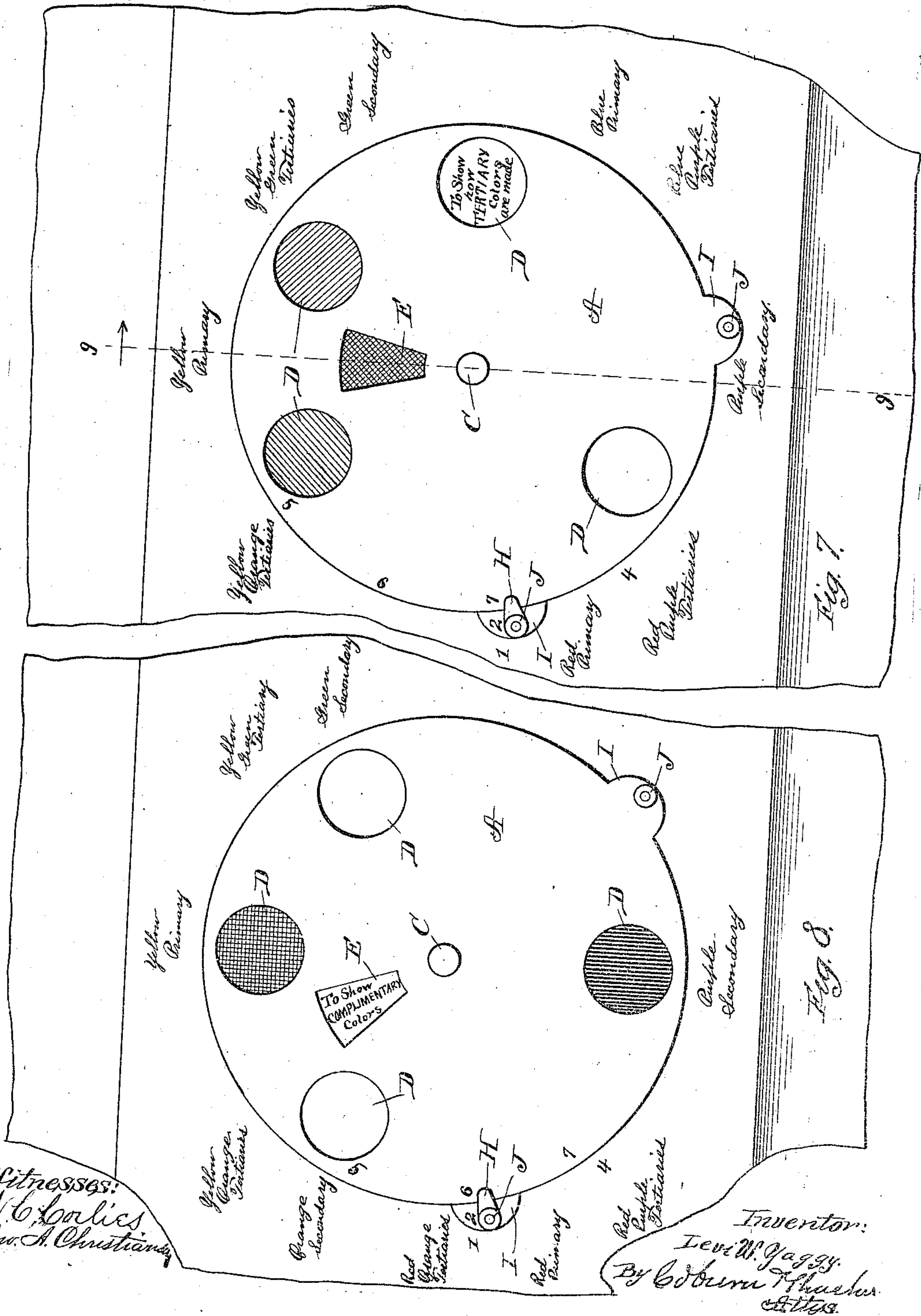
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L. W. YAGGY.
COLOR CHART.

4 Sheets—Sheet 4.

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Patented Mar. 10, 1896.



UNITED STATES PATENT OFFICE.

LEVI W. YAGGY, OF LAKE FOREST, ILLINOIS

COLOR-CHART.

SPECIFICATION forming part of Letters Patent No. 556,077, dated March 10, 1898.

Application filed May 15, 1895. Serial No. 549,360. (No specimens.)

To all whom it may concern:

Be it known that I, LEVI W. YAGGY, a citizen of the United States, residing at Lake Forest, in the county of Lake and State of Illinois, have invented a certain new and useful Improvement in Tablets Showing How to Mix Paints, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 shows the colors arranged in a predetermined relative position to each other in form to be covered by a circular disk. Fig. 2 is a sectional view taken through the color-board and the revolving disks connected therewith, showing how these disks are attached to the color-board. Fig. 3 shows a front view of the circular disks attached to the center of the color-board shown in Fig. 1. Fig. 4 is a back or under view of the disks attached to the center of the color-board shown in Fig. 1. Fig. 5 is the opposite side of that side of the disk shown in Fig. 4, showing the printing thereon. Fig. 6 shows the two disks which revolve on the color-board, Fig. 1, turned relatively to each other in position to show through them what colors are used to make the secondary color, which is also shown through them. Fig. 7 shows these same two disks revolved relatively to each other to show what colors are used to produce what is termed a "tertiary" color. Fig. 8 shows these same disks revolved relatively to each other, so that when they are turned on the color-board they will show colors complementary to each other.

The object of my invention is to furnish a tablet of colors to be used by those who wish to mix pigments or colors to produce certain other colors that are shown on my tablet.

When it is desired to produce a certain color in mixing paints, especially those to be used by artists in painting pictures, it is very difficult to determine what color it is necessary to use to produce the desired color. It is well understood that there are three primary colors: blue, red, and yellow. There are three secondary colors: green, which is produced by mixing in equal parts yellow and blue; purple, which is produced by mixing in equal parts blue and red, and orange, which is produced by mixing in equal parts red and yellow.

I have arranged the primary colors on my

tablet, as shown in Fig. 1 of the drawings, equidistances apart relatively to each other, and at equal distances from the center of the color-board. I have also arranged the secondary colors between the two primary colors of which they are composed. I have also shown between the secondary colors and the primary colors some tertiary colors, as marked in Fig. 1. Within the said ring containing the primary, secondary, and some of the tertiary colors sectors of the remaining principal and most useful tertiary colors are shown.

I have two disks A and B, which are centrally secured on a stud C, said stud being firmly attached to the color-board at its center. The disk A is provided with four openings D corresponding in size to the primary and secondary colors on the color-board, and an opening E corresponding in size to the tertiary colors arranged on the color-board between the primary and secondary colors and the center of the board. In the disk B, I have seven openings F corresponding in size to the openings D in the disk A and arranged at the same distance from the center of the disk, and also an opening G corresponding to the opening E in the disk A.

The disks A and B are secured together at their outer edges by an overlapping piece H, attached to a projecting flange I. The overlapping piece H is secured to a stud J, by which the disks are revolved one on the other or on the center post or stud C. I place stops K on these disks to limit the distance of revolution of one disk on the other. The overlapping piece H will strike these stops. When these disks are turned relatively to each other and relatively to the color-board so that the figures 1, 2 and 3 are in line, as shown in Fig. 3 of the drawings, the primary colors are shown through three of the openings in the disks, these primary colors being marked on the margin of the cardboard, as shown in Fig. 1. When the disks are turned in that relative position to each other the opening E in the front disk stands over the words "To show primaries, &c.," printed on the inside of the disk B.

When it is desired to ascertain which of the primary colors it is necessary to mix to obtain a secondary color, the disks A and B are rotated relatively to each other and relatively

to the color-board into the position so that the figures 4, 2 and 5 are in line, as shown in Fig. 6 of the drawings. Then by turning the disks on the color-board until the secondary color which it is desired to make—as, for instance, orange—appears through the central opening the primary colors of which it is composed (red and yellow) appear through two of the openings in the disk. If it is desired to produce a green color, then the disks are turned on the color-board until green appears in the middle opening in the disks, the colors which are mixed to make green—namely, blue and yellow—will appear through the other two openings. If it is desired to make purple, by again turning the disks so that purple will appear through the central opening of the three openings, red and blue will appear through the other two openings, thereby showing what primary colors are mixed together to produce each of the secondary colors. When the two disks are revolved so that the figures 4, 2 and 5 appear in juxtaposition, as shown in Fig. 6, the words “To show how secondary colors are made” appear through the opening E in the disk A.

If it is desired to produce a tertiary color, the disks A and B are revolved relatively to each other and to the color-board, so that the figures 2 and 7 are brought in juxtaposition, as shown in Fig. 7 of the drawings. At the same time the words “To show how tertiary colors are made” appear through one of the openings D, and two different colors will appear through the openings D, and a tertiary color will appear through the opening E. The two colors shown through the openings D will always be the colors which are mixed to produce the tertiary color which appears through the opening E. By revolving the two disks A and B in that position relatively to each other to cause whatever tertiary color it is desired to make of all the tertiary colors arranged in position to appear through the opening E as the disks revolve on the color-board, the two colors required to make that tertiary color will appear through the openings D.

When it is desired to ascertain which of the colors are complementary to each other, the disks A and B are revolved relatively to each other and to the color-board, so that the figures 2 and 6 appear in juxtaposition, as shown in Fig. 8, when the words, “To show complementary colors” will appear through the opening E in the disk. Then by turning the disks while in that position on the color-board the colors which appear through the openings D will always be complementary to each other. To bring these colors which are complementary to each other in position on the color-board opposite to each other, I have arranged some of the tertiary colors in the circle on the color-board in which I have placed the primary colors and the secondary colors. It will thus be seen that by this arrangement of colors on the color-board and by means of the disks which are revolved on the color-board

relatively to each other to bring their openings in certain relative positions I am able to show through the openings in the disks the primary colors, all of the other colors being covered by the disks. I am also able by turning the disks relatively to each other and into a certain position relative to the color-board to set them so that when the disks are revolved on the color-board two primary colors only will show through the disks and at the same time a secondary color, which is produced by mixing these two primary colors together, and by turning the disks the primary colors necessary to use to produce the desired secondary color are shown through the disks at the same time that that particular secondary color is shown, all of the other colors on the color-board being covered. In the same manner I disclose what colors are required for making any of the tertiary colors, and also by arranging the disks in a certain other relative position to each other and the color-board there is displayed through the disks the colors which are complementary to each other, all of the other colors being at the same time covered.

It will be seen that in this color-board I arrange the different colors in certain relative positions to each other, so that it can be readily determined what colors are to be mixed to produce any desired color—as, for instance, if one wishes to produce a particular color, shade, or tint, that particular color, shade or tint is found on the color-board, and then by the use of the color-board the disks are used to exhibit through them the desired tint or color and at the same time exhibit through them the colors which are to be mixed to produce the desired color, shade, or tint.

By the use of the color-board with the disks all of the other colors are covered, excepting the one which it is desired to make and the two colors which are used to make that desired color.

My tablet showing how to mix pigments or colors is adapted to be used in schools as a study with which to teach the science of colors from the primary colors through all the different colors and shades and tints which can be produced, and which are used in painting pictures or in any other department of practical or artistic work in which colors are mixed to produce certain other colors, shades or tints.

I of course publish a description of my tablet, with the method of operating it, to be used in connection with the tablet in schools, which furnishes a complete study of colors, teaching the method of using them.

Having fully described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a tablet showing how to mix colors, a color-board bearing different colors arranged in a certain predetermined method; and movable plates or disks having openings through them which are movable upon the color-board

to disclose through them the colors to be mixed together to produce a certain other color, which is also disclosed through the movable plates or disks.

5 2. In a tablet showing how to mix colors, a color-board having various colors arranged upon it in a specific predetermined order of arrangement; and plates or disks thereon and
10 other, with openings through said revoluble plates or disks, the openings being so arranged that when the plates or disks are revolved into a certain position as to each other, only one class of colors will be exhibited through
15 said plates or disks as they are revolved upon the color-board, together with the colors required to be mixed to produce that class of colors.

20 3. In a tablet showing how to mix colors, a color-board having colors on it arranged in a definite predetermined method of arrangement; plates or disks revoluble on said color-board, having openings through which the various colors are exhibited that are required
25 to be mixed to produce a certain other color, which is also exhibited through one of the openings, with printing on the lower disk that will be exhibited through an opening in the upper disk, stating what class of colors is to

be produced by mixing the colors which are 30 exhibited through the plates or disks when revolved upon the color-board in that particular position relative to each other.

4. In a tablet showing how to mix colors, a color-board with colors arranged thereon in a 35 predetermined order of arrangement; the disks A and B revoluble on said color-board, said disks having openings therein and revoluble upon each other to bring the openings in the disks opposite each other to exhibit 40 colors on the color-board through them.

5. In a tablet showing how to mix colors, the color-board with colors arranged thereon; plates or disks revoluble on said color-board, said plates or disks being revoluble relatively 45 to each other; openings in said disks arranged so as to exhibit certain of the colors on the color-board through them in different relative positions to each other, with words and figures on the disks and color-board show- 50 ing how to turn the plates or disks relatively to each other and to the color-board to exhibit a certain class of colors through the plates or disks.

LEVI W. YAGGY.

Witnesses:

ALOYSIA HELMICH,
A. A. MURRAY.