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(54) **COLOR BY SYMBOL PICTURE PUZZLE KIT**

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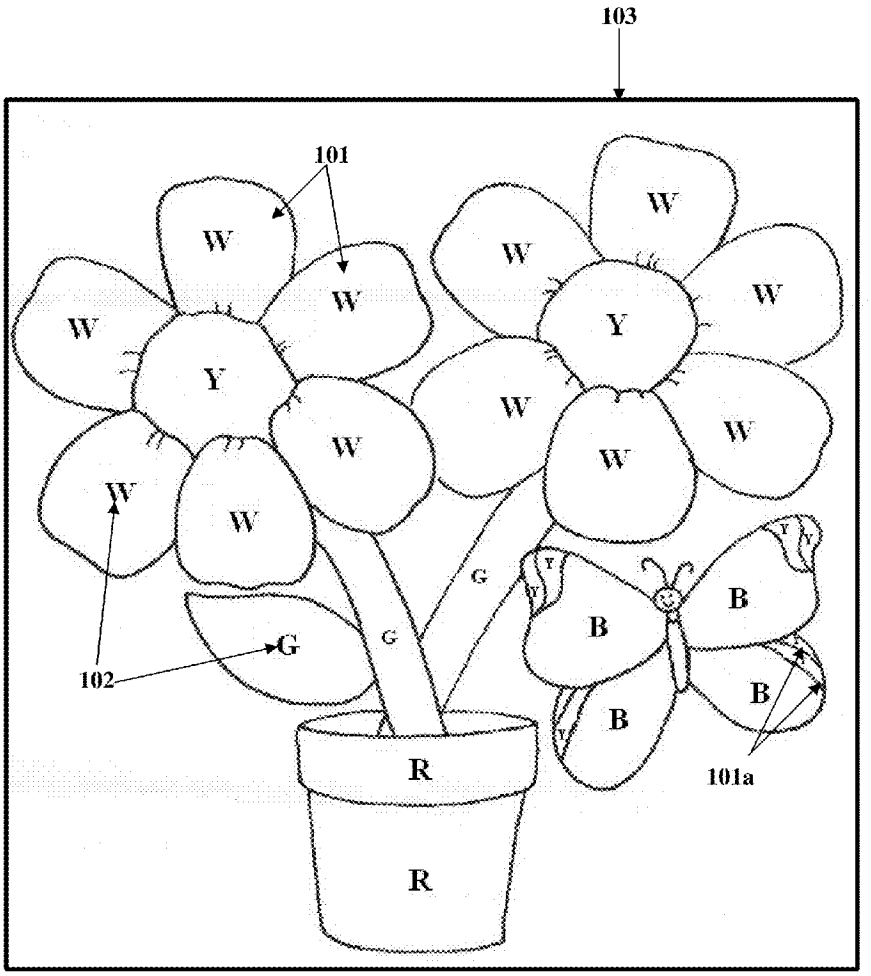
(57) **ABSTRACT**

A picture puzzle kit is provided for coloring a picture puzzle marked with indicia corresponding to multiple colors. The picture puzzle kit comprises puzzle pieces, color charts, and coloring tools. The puzzle pieces comprise parts of a picture and are marked with indicia corresponding to different colors. The color charts display colors corresponding to the indicia marked on the puzzle pieces. In an embodiment, multiple removable layers are stacked one above the other on each of the puzzle pieces. In another embodiment, an embedded audio assembly is provided in each of the puzzle pieces and the color charts for audibly indicating characteristics of the puzzle pieces and the color charts respectively. The puzzle pieces are linked to assemble the picture puzzle. The coloring tools enable the user to color the puzzle pieces using the colors displayed on the color charts corresponding to the indicia marked on the puzzle pieces.



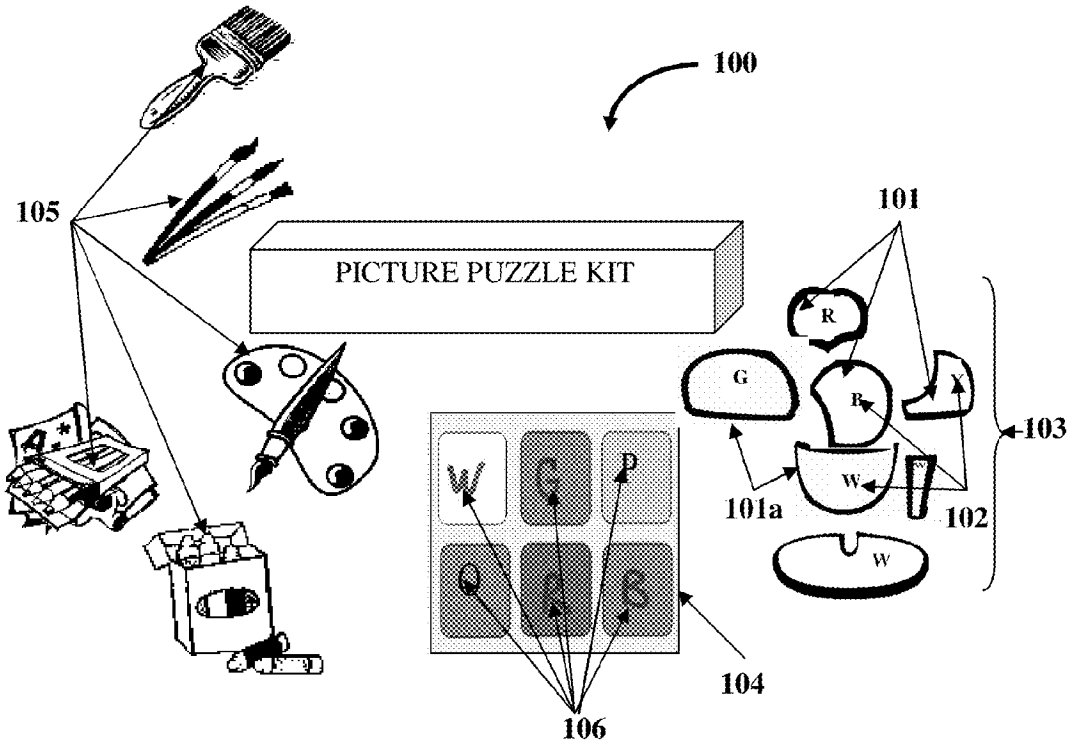


FIG. 1

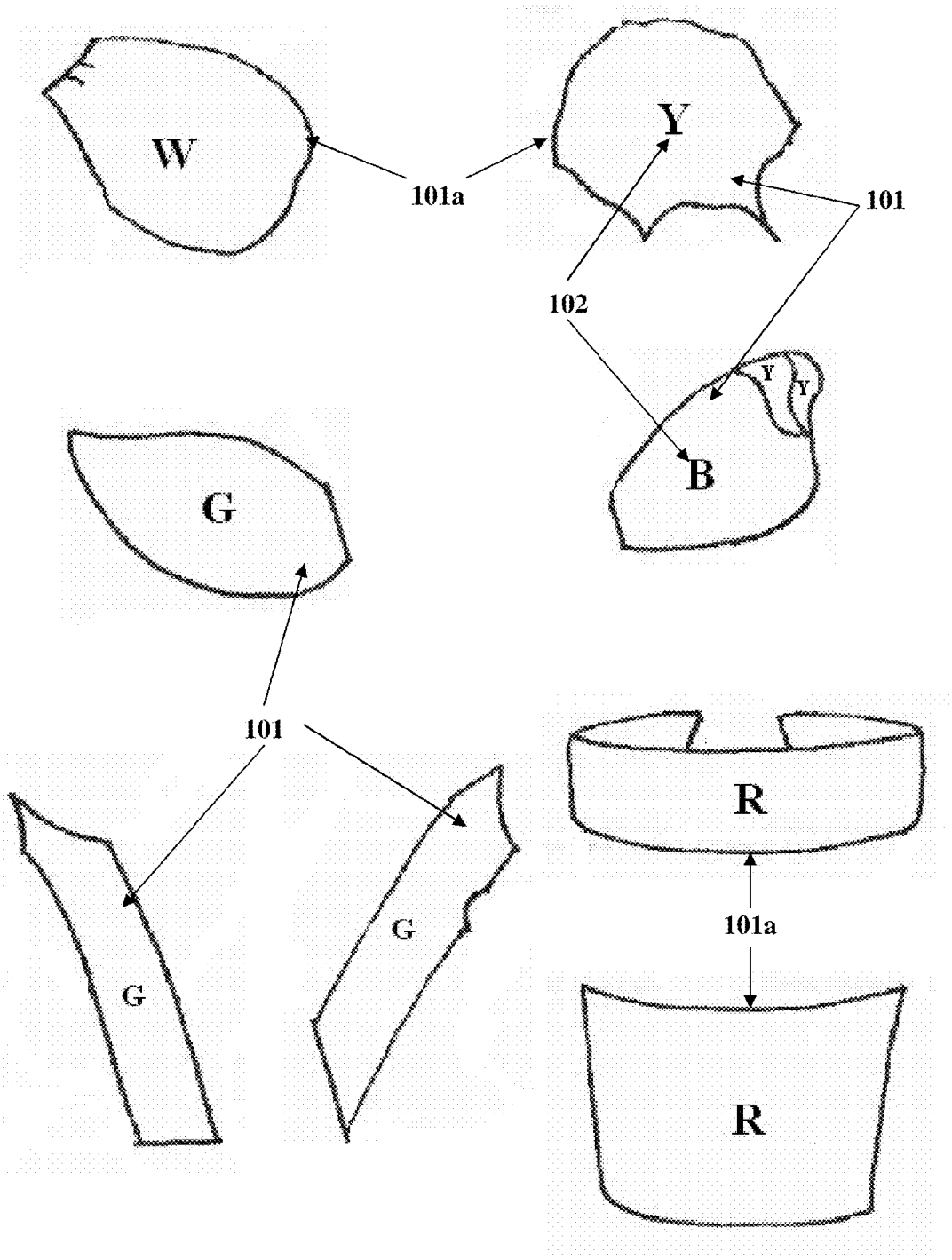


FIG. 2A

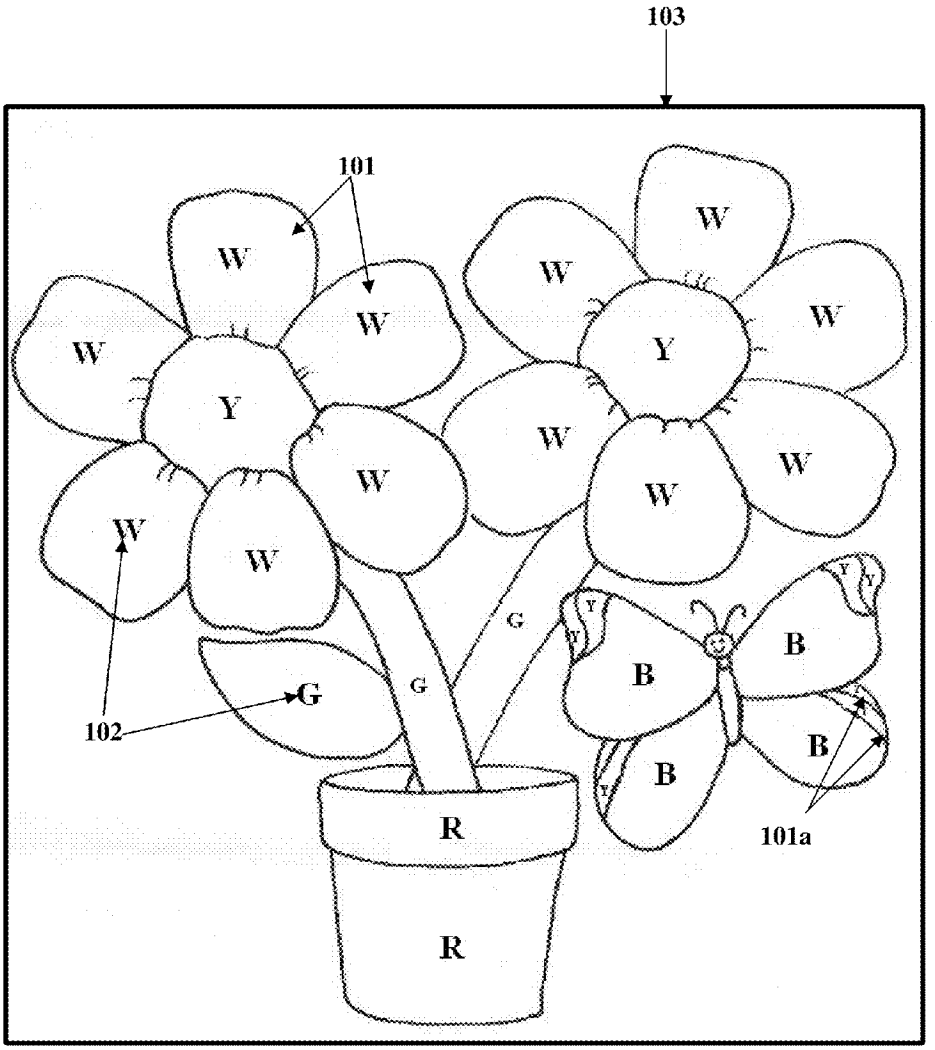


FIG. 2B

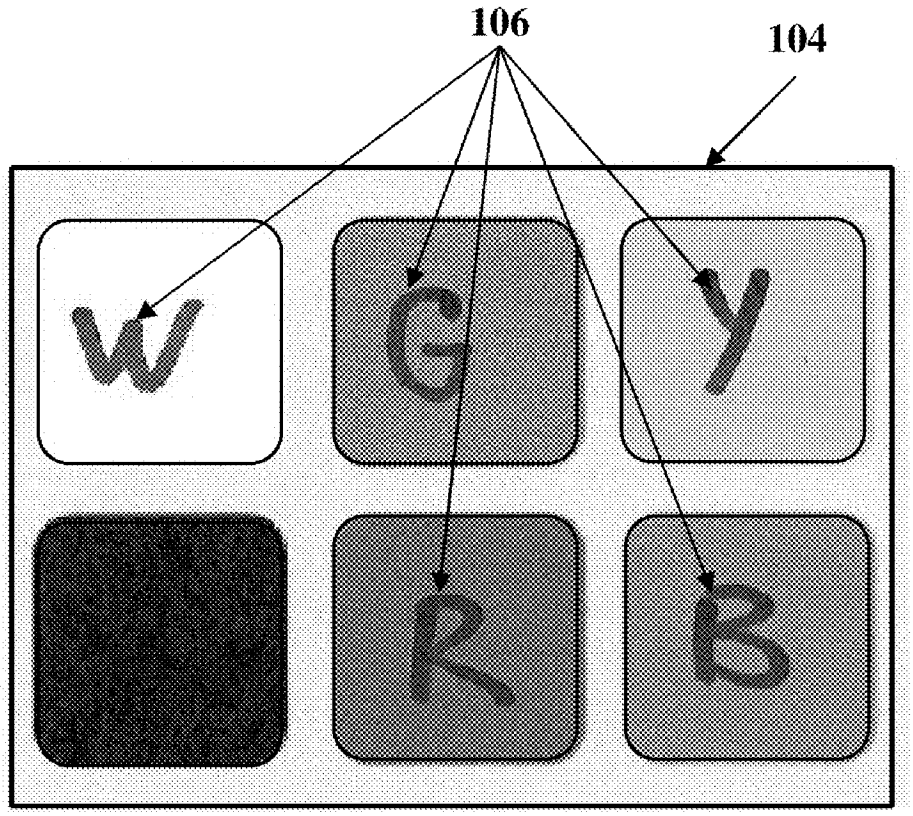


FIG. 3

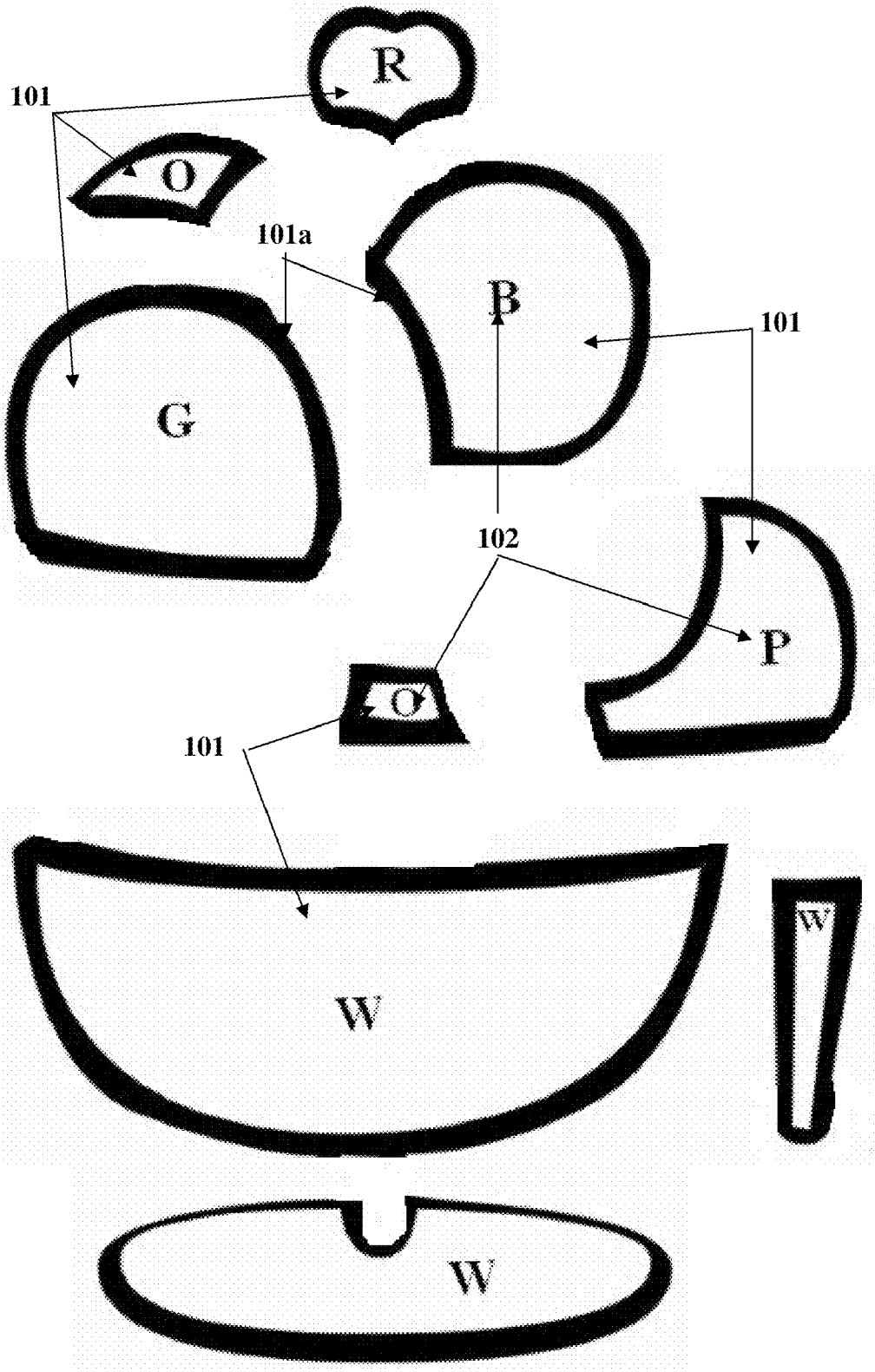


FIG. 4A

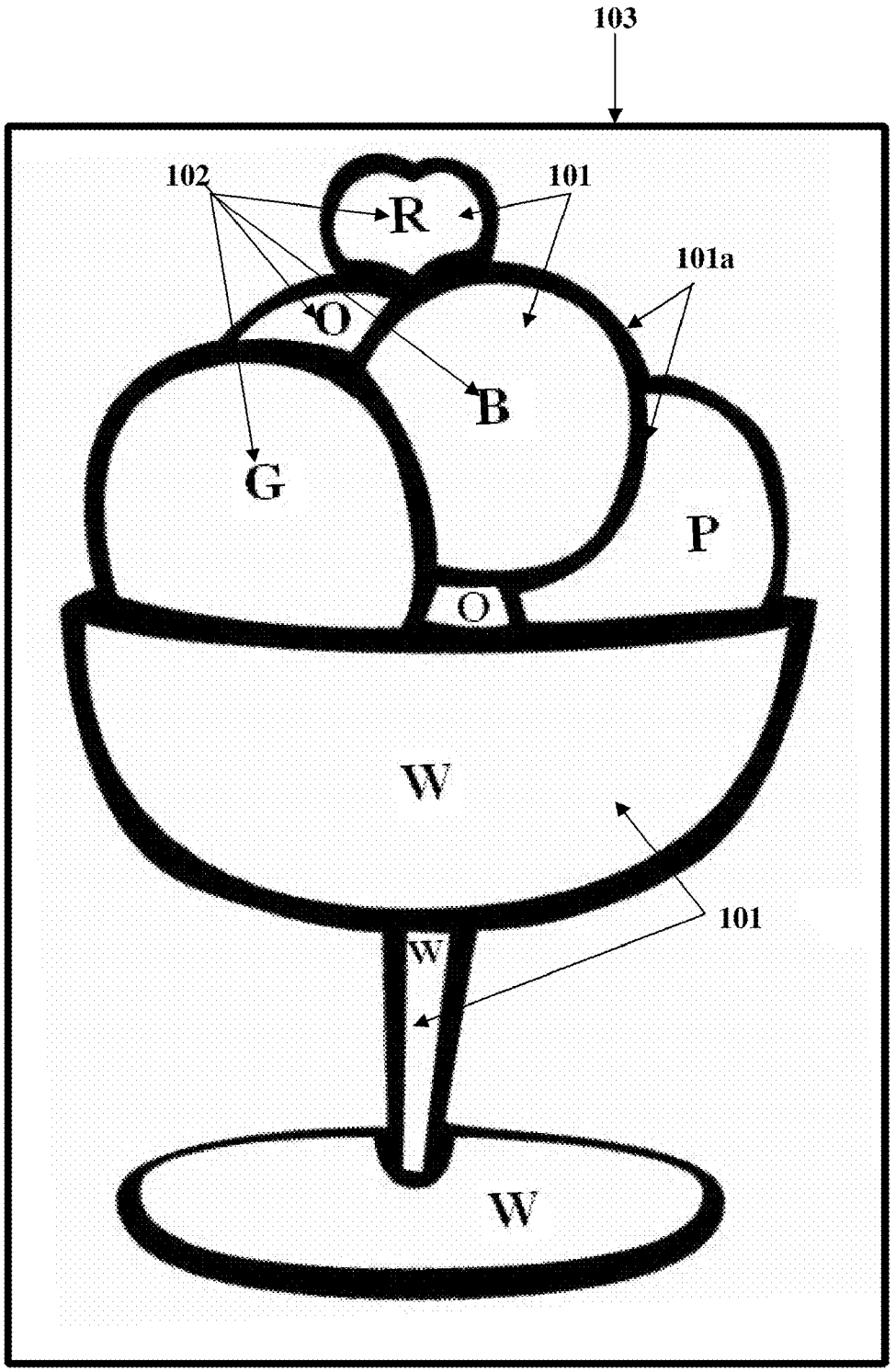


FIG. 4B

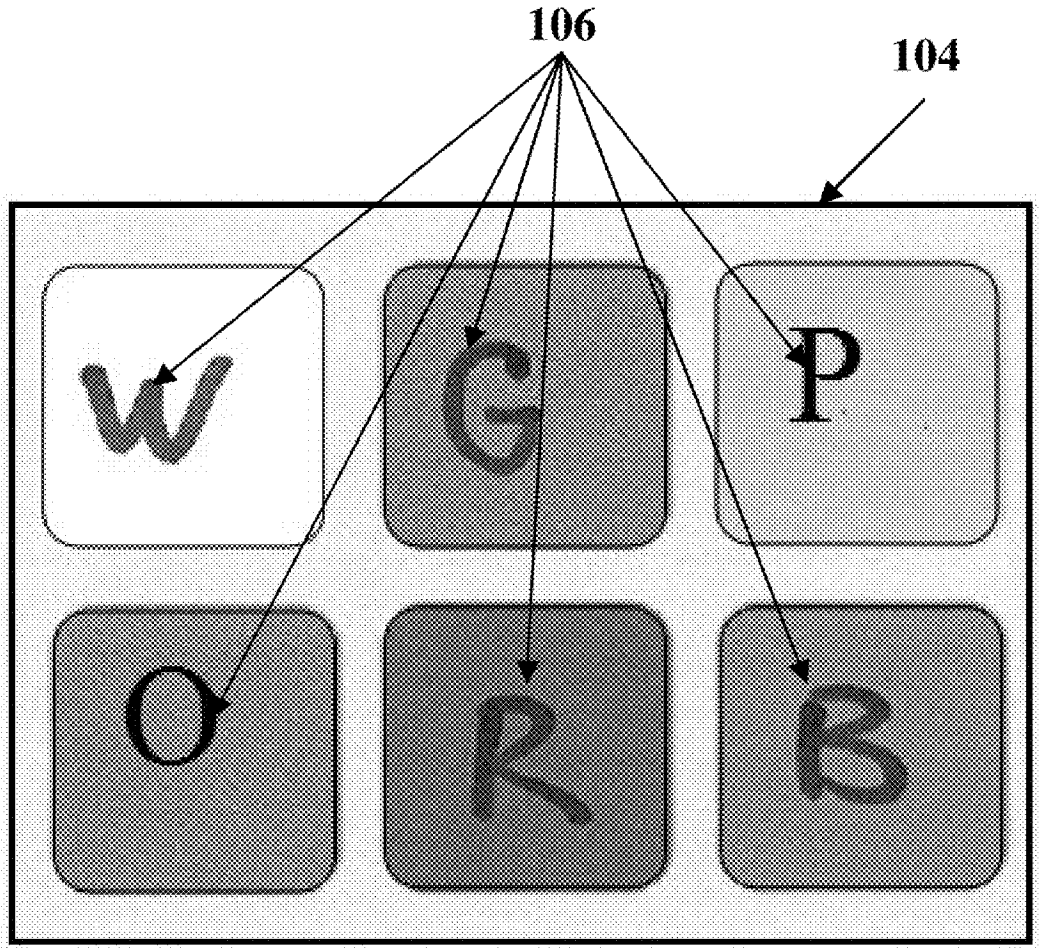


FIG. 5A

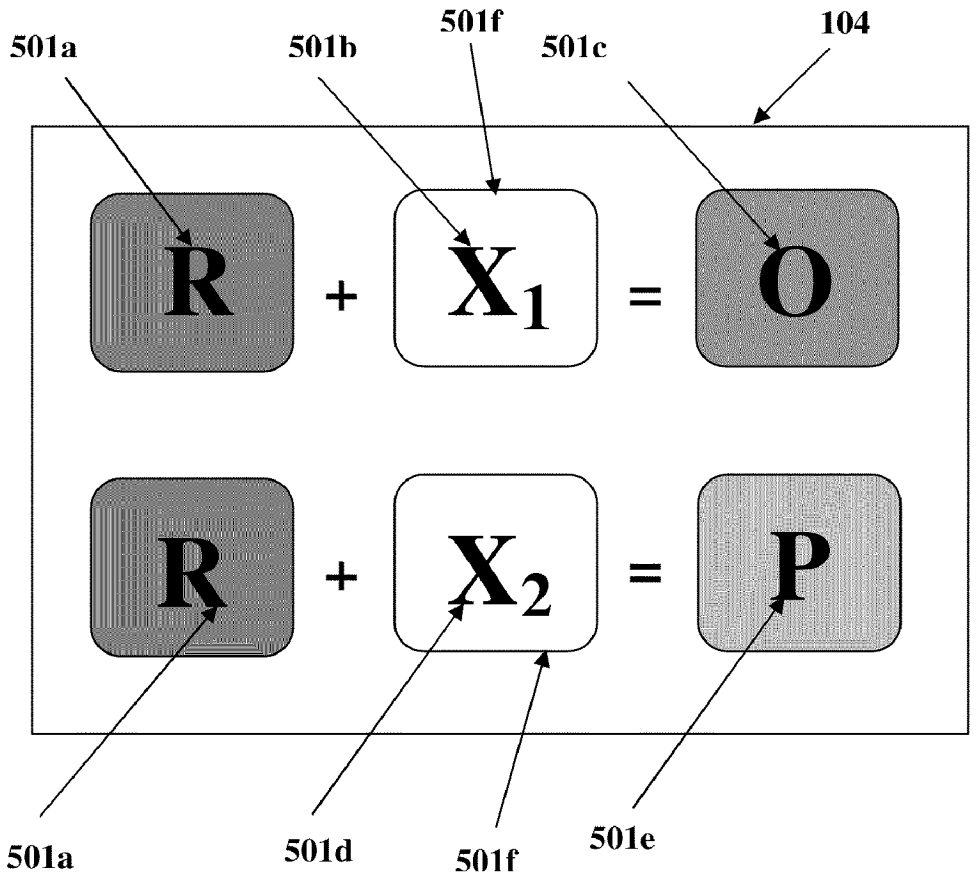


FIG. 5B

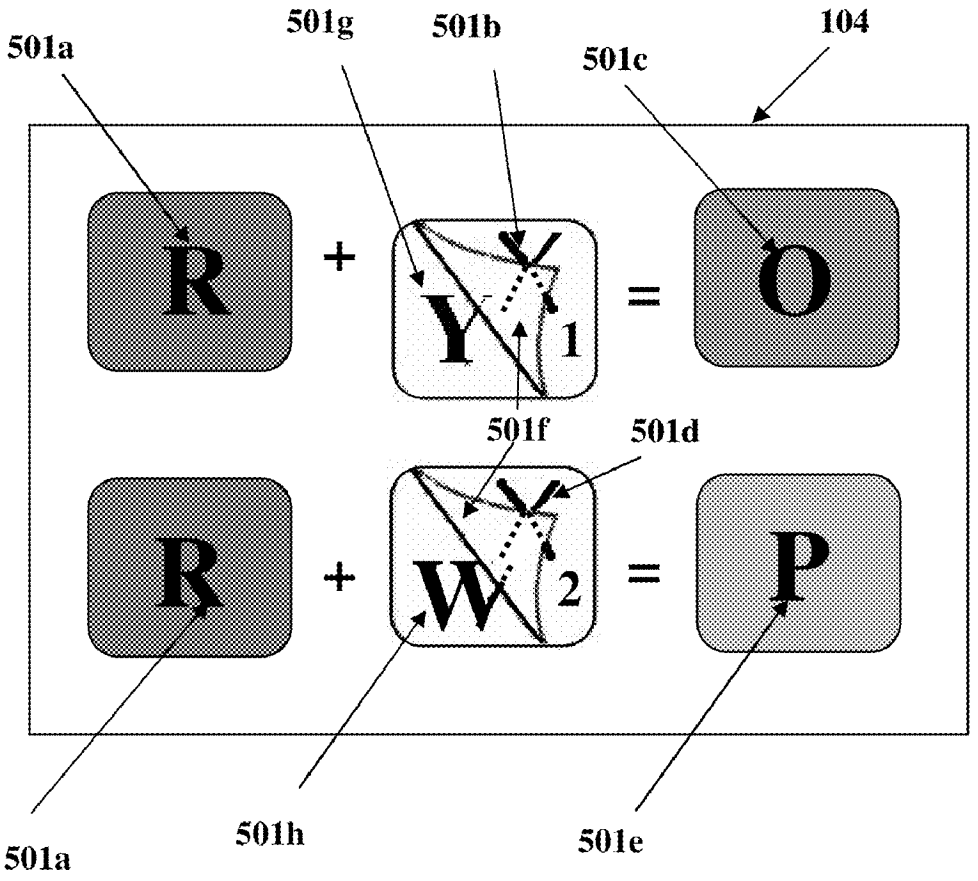


FIG. 5C

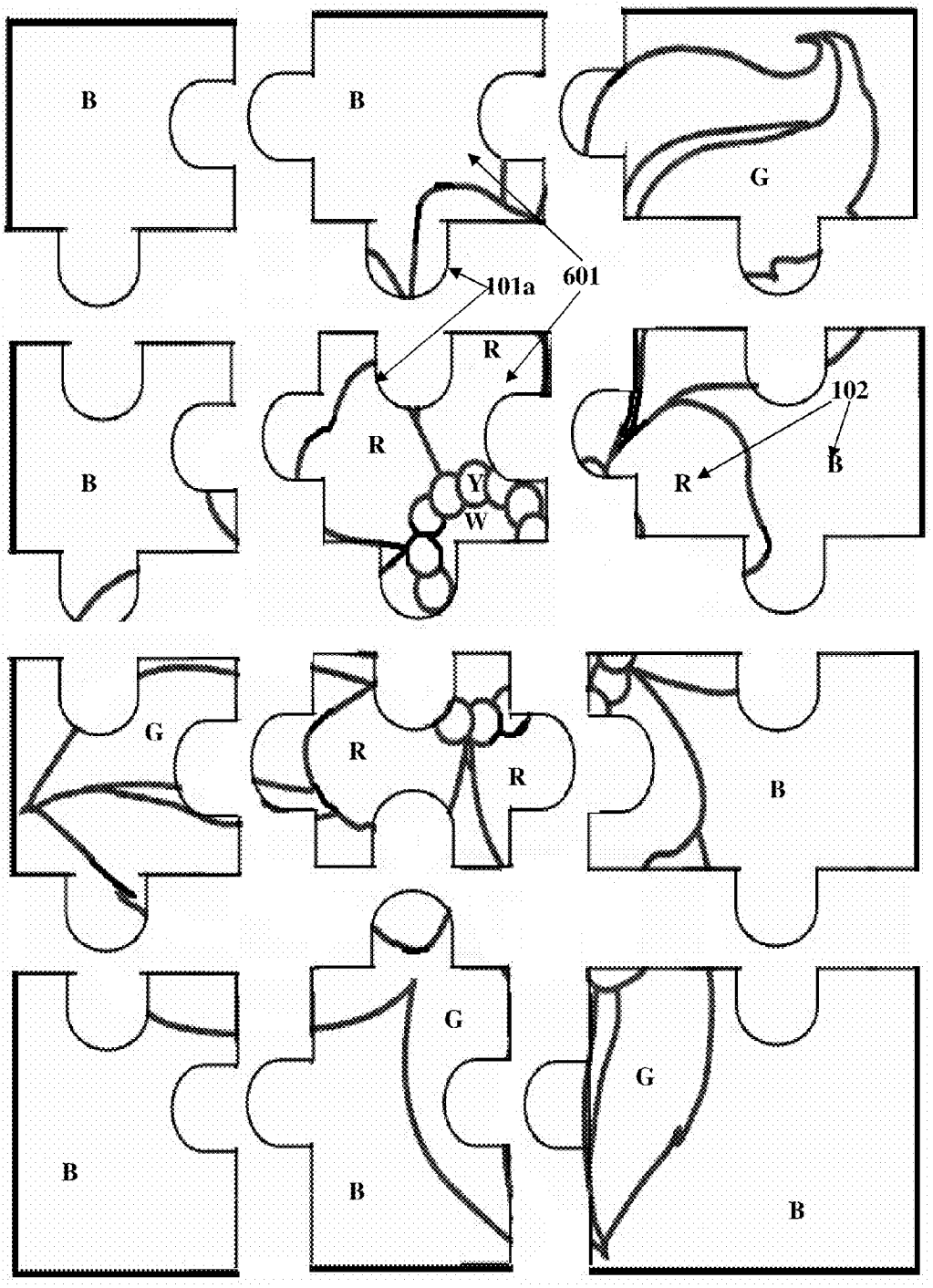


FIG. 6A

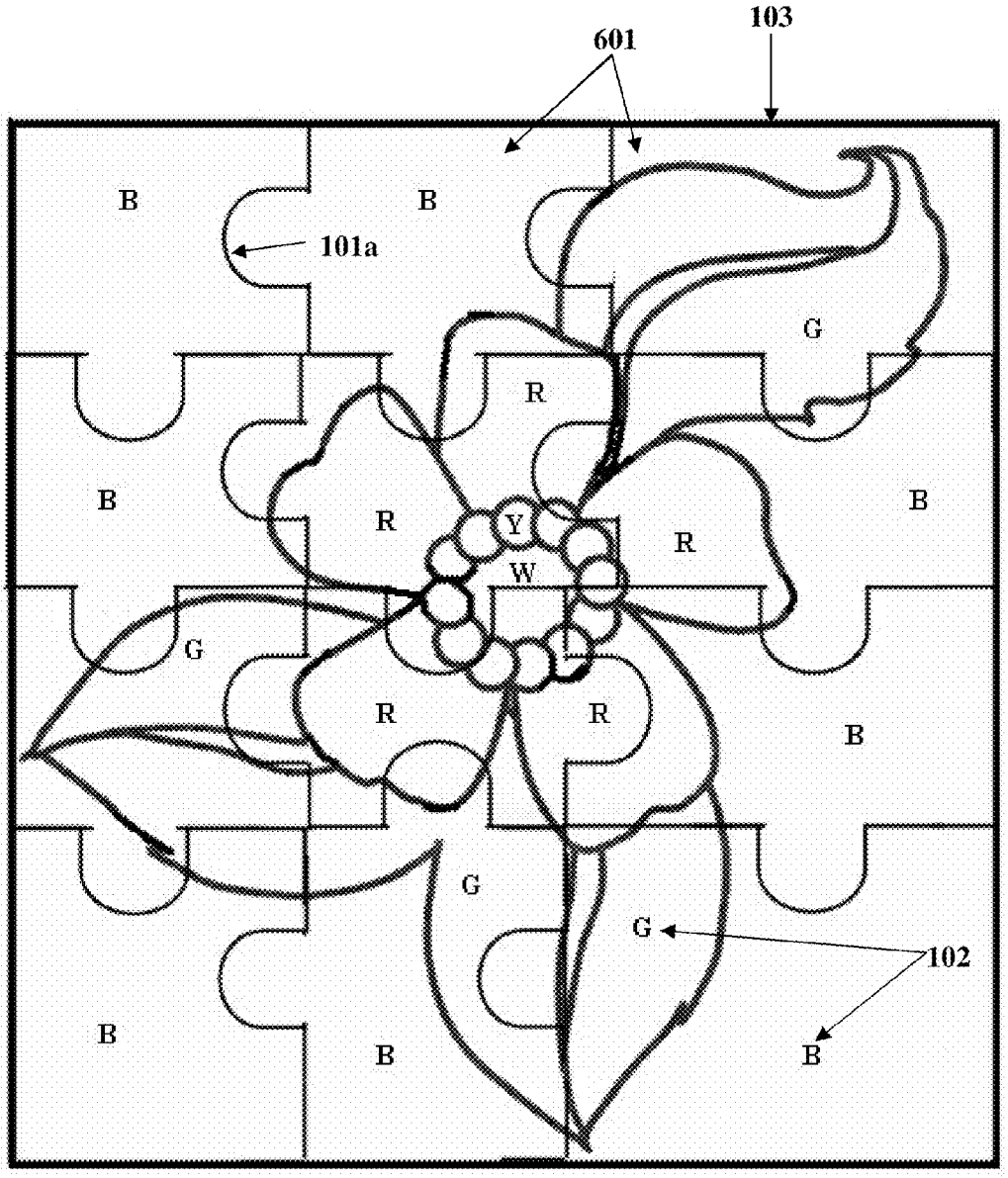


FIG. 6B

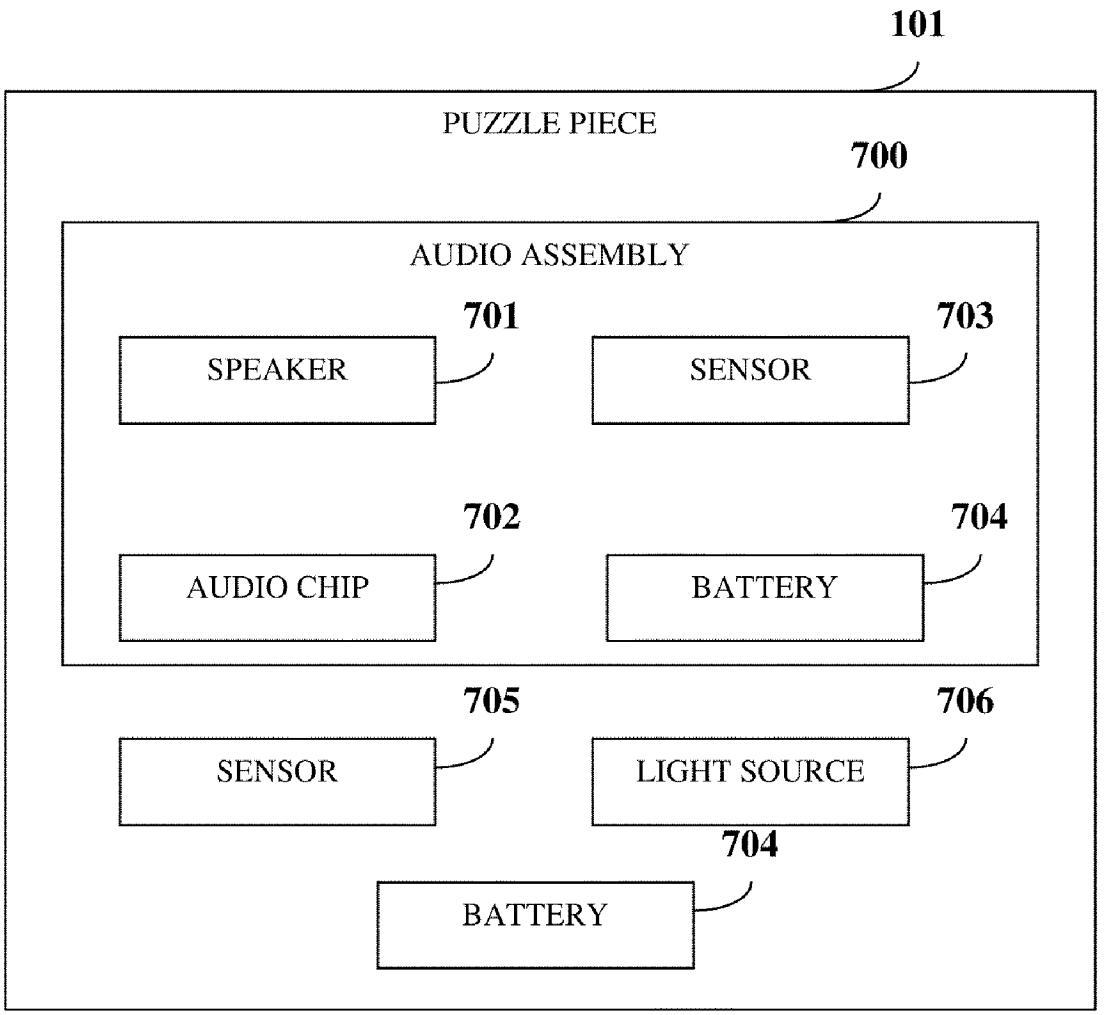

101
PUZZLE PIECE
700
AUDIO ASSEMBLY
701
SPEAKER
703
SENSOR
702
AUDIO CHIP
704
BATTERY
705
SENSOR
706
LIGHT SOURCE
704
BATTERY

FIG. 7

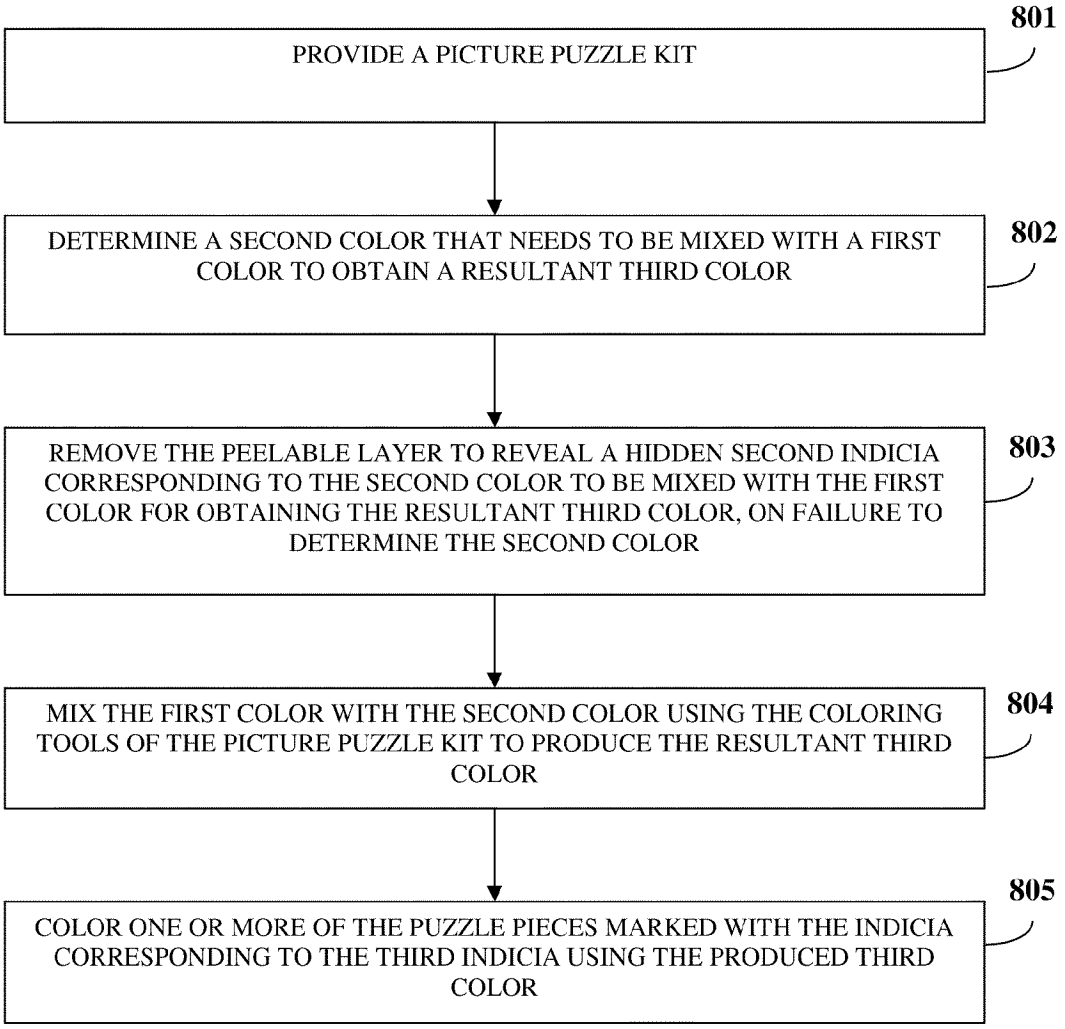

801
PROVIDE A PICTURE PUZZLE KIT
802
DETERMINE A SECOND COLOR THAT NEEDS TO BE MIXED WITH A FIRST COLOR TO OBTAIN A RESULTANT THIRD COLOR
803
REMOVE THE PEELABLE LAYER TO REVEAL A HIDDEN SECOND INDICIA CORRESPONDING TO THE SECOND COLOR TO BE MIXED WITH THE FIRST COLOR FOR OBTAINING THE RESULTANT THIRD COLOR, ON FAILURE TO DETERMINE THE SECOND COLOR
804
MIX THE FIRST COLOR WITH THE SECOND COLOR USING THE COLORING TOOLS OF THE PICTURE PUZZLE KIT TO PRODUCE THE RESULTANT THIRD COLOR
805
COLOR ONE OR MORE OF THE PUZZLE PIECES MARKED WITH THE INDICIA CORRESPONDING TO THE THIRD INDICIA USING THE PRODUCED THIRD COLOR

FIG. 8

COLOR BY SYMBOL PICTURE PUZZLE KIT

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This is a continuation in part application of non-provisional U.S. patent application Ser. No. 12/188,208, titled "Color By Symbol Picture Puzzle Kit" filed on Aug. 8, 2008 in the United States Patent and Trademark Office.

BACKGROUND

[0002] This invention, in general, relates to puzzles. More particularly, this invention relates to coloring a picture puzzle using indicia representing different colors marked on the picture puzzle.

[0003] A puzzle is a game that requires ingenuity and persistence in assembling or solving. Puzzles are often devised as a form of entertainment. Puzzles may be divided into different categories, for example, jigsaw puzzles, picture puzzles, transport puzzles, word puzzles, sliding puzzles, logic puzzles, folding puzzles, etc. Typically, puzzles only provide a user a means of assembling puzzle pieces together. There is a need for puzzles that allow a user to color a puzzle piece by associating an indicia of the color marked on the puzzle piece with the color shown in a color chart.

[0004] Hence, there is a need for a picture puzzle kit that is educational in nature and entertains a user by allowing the user to color a picture puzzle using indicia representing different colors marked on the puzzle pieces.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The following detailed description of the invention is better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, exemplary constructions of the invention are shown in the drawings. However, the invention is not limited to the specific methods and instrumentalities disclosed herein.

[0006] FIG. **1** illustrates a picture puzzle kit that enables a user to color a picture puzzle marked with indicia corresponding to multiple colors.

[0007] FIG. **2**A exemplarily illustrates puzzle pieces comprising parts of a picture of a flower pot.

[0008] FIG. **2**B exemplarily illustrates puzzle pieces marked with indicia representing different colors, placed adjacent to one another to assemble the flower pot picture puzzle.

[0009] FIG. **3** exemplarily illustrates a color chart for the flower pot picture puzzle, displaying different colors corresponding to the indicia marked on the puzzle pieces of the flower pot picture puzzle.

[0010] FIG. **4**A exemplarily illustrates puzzle pieces comprising parts of a picture of an ice cream sundae.

[0011] FIG. **4**B exemplarily illustrates puzzle pieces marked with indicia representing different colors, placed adjacent to one another to assemble the ice cream sundae picture puzzle.

[0012] FIGS. **5**A-**5**C exemplarily illustrate color charts for the ice cream sundae picture puzzle, displaying different colors corresponding to the indicia marked on the puzzle pieces of the ice cream sundae picture puzzle.

[0013] FIG. **6**A exemplarily illustrates jigsaw puzzle pieces comprising parts of a picture of a flower.

[0014] FIG. **6**B exemplarily illustrates jigsaw puzzle pieces marked with indicia representing different colors, interlocked to assemble the flower picture puzzle.

[0015] FIG. **7** exemplarily illustrates a block diagram of a puzzle piece embedded with an audio assembly for audibly indicating one or more characteristics of the puzzle piece.

[0016] FIG. **8** exemplarily illustrates a method of coloring puzzle pieces of a picture puzzle using indicia marked on the puzzle pieces.

DETAILED DESCRIPTION OF THE INVENTION

[0017] FIG. **1** illustrates a picture puzzle kit **100** that enables a user to color a picture puzzle **103** marked with indicia **102**, for example W, G, B, R, etc. corresponding to multiple colors. The picture puzzle kit **100** disclosed herein comprises multiple puzzle pieces **101**, a color chart **104**, and coloring tools **105**. Each of the puzzle pieces **101** has a length, a width, and a thickness. The thickness is small compared to the length and the width. Each of the puzzle pieces **101** defines an outside edge **101***a*. The outside edge **101***a* of each of the puzzle pieces **101** is configured to mate with an outside edge **101***a* of at least one or two other puzzle pieces **101**.

[0018] The puzzle pieces **101** comprise parts of a picture. FIG. **2**A exemplarily illustrates puzzle pieces **101** comprising parts of a picture of a flower pot. The puzzle pieces **101** are marked with and display indicia **102** or symbols that correspond to different colors. The indicia **102** displayed on the puzzle pieces **101** are marked by, for example, stamping, engraving, imprinting, impressing, etc. The indicia **102** are, for example, in the form of alphabets corresponding to different colors. For example, in FIG. **2**A, the puzzle pieces **101** are marked with the indicia **102** W, G, Y, R, and B corresponding to the colors white, green, yellow, red, and blue respectively. The puzzle pieces **101** are made of, for example, plastic, card board, or a wooden material. The wooden material is, for example, a wood composite, a pressed wood, a solid wood, etc. The picture puzzle kit **100** may further comprise a base for supporting the puzzle pieces **101**.

[0019] The picture puzzle **103** is assembled by linking the puzzle pieces **101**. The picture puzzle **103** is of different designs. The puzzle pieces **101** are linked by placing the puzzle pieces **101** adjacent to one another or by interlocking the adjacent puzzle pieces **101**. FIG. **2**B exemplarily illustrates puzzle pieces **101** marked with indicia **102** representing different colors, placed adjacent to one another to assemble the flower pot picture puzzle **103**. In an embodiment, the puzzle pieces **101** are also shaped as jigsaw puzzle pieces **601** as exemplarily illustrated in FIG. **6**A, for linking the puzzle pieces **101** by interlocking. The puzzle pieces **101** together define the picture when the outside edge **101***a* of each of the puzzle pieces **101** are mated one to another and each one of the puzzle pieces **101** is colored with colors corresponding to the colors on the color chart **104** corresponding to the indicia **102** marked on the puzzle pieces **101** using the coloring tools **105**.

[0020] In an embodiment, multiple removable layers are stacked one above the other on each of the puzzle pieces **101**. The removable layers are, for example, peel-off self adhesive sheets of flexible plastic or scratch-off layers. Each of the removable layers is removed to reveal another one of the removable layers below the removed layer. The removable layers are marked with different indicia **102**, therefore each one of the revealed removable layers presents a different coloring possibility on the puzzle pieces **101**. In an embodi-

ment, each of the removable layers is transparent and is marked with one of the indicia **102** corresponding to one of the different colors. When transparent layers are used, the removable layers below the removed upper layers are partially visible due to the transparence. Coloring tools **105** of translucent colors are provided for coloring on the transparent removable layers. A user may color on one layer, or may remove the first layer and then color on the next layer. Also, when the colored layers are placed one above the other on the puzzle pieces **101**, the colored layers in combination form new colors. In another embodiment, the layers affixed to the puzzle pieces **101** are not transparent.

[0021] Consider an example where a transparent removable top layer and a transparent removable bottom layer are stacked one above the other on the upper surface of the puzzle piece **101**. The top layer is marked with an indicia, for example, B. The bottom layer is marked with an indicia, for example, Y. The user first colors the top layer blue in accordance with the color chart **104** for the indicia B on the puzzle piece **101** using one of the coloring tools **105** provided in the picture puzzle kit **100**. The user then removes the top layer to expose the bottom layer. On seeing the indicia Y marked on the bottom layer, the user determines that Y represents the color yellow using the color chart **104**. The user then colors the bottom layer yellow using the coloring tools **105** provided in the picture puzzle kit **100**. The user can then reattach the blue colored top layer over the yellow colored bottom layer on the puzzle piece **101** to yield a green color for the puzzle piece **101**.

[0022] A battery **704** operated light source **706**, for example, a light emitting diode (LED), as exemplarily illustrated in FIG. **7** may be embedded in the puzzle piece **101** to illuminate the colored removable layers stacked on the puzzle piece **101**. The yellow colored bottom layer and the blue colored top layer on the puzzle piece **101** in combination will therefore appear as an illuminated green colored puzzle piece.

[0023] In another embodiment, a rub off removable layer is provided on each of the puzzle pieces **101**. The rubbed off removable layer reveals one of the indicia **102** corresponding to one of the colors for the puzzle piece **101**.

[0024] In another embodiment, each of the puzzle pieces **101** comprises an embedded audio assembly **700** for audibly indicating a single or a combination of characteristics, for example, color, name, etc. of each of the puzzle pieces **101** when pressure is applied on the puzzle pieces **101**. FIG. **7** exemplarily illustrates a block diagram of a puzzle piece **101** embedded with an audio assembly **700** for audibly indicating one or more characteristics of the puzzle piece **101**. The embedded audio assembly **700** comprises a battery **704**, an audio chip **702**, and a speaker **701**. The embedded audio assembly **700** further comprises a sensor **703** for sensing the applied pressure. As an example, when a user presses a puzzle piece **101** marked the indicia **102** G with a finger, the speaker **701** audibly announces the word "green". In another example, when the user presses a puzzle piece **101** shaped like a leaf, the speaker **701** announces the word "leaf". A combination of characteristics, for example, name along with the color, of each of the puzzle pieces **101** may also be announced when pressure is applied on each of the puzzle pieces **101**. For example, when the user presses a puzzle piece **101** shaped like a leaf marked with an indicia **102** G, the speaker **701** announces a message "green leaf". The user can then color the puzzle piece **101** with a green color using the coloring tools **105** provided in the picture puzzle kit **100**.

[0025] In an embodiment, the embedded audio assembly **700** audibly indicates the characteristics of each of the puzzle pieces **101** when each of the puzzle pieces **101** is pressed one or more times. The audio chip **702** in the embedded audio assembly **700** is programmed to count the number of times pressure is applied on each of the puzzle pieces **101** and sends an appropriate message signal to the speaker **701**. For example, the embedded audio assembly **700** audibly indicates the color of a puzzle piece **101** when pressed one time and the name of puzzle piece **101** when pressed a second time. The user can then color the puzzle piece **101** with the corresponding color using the coloring tools **105** provided in the picture puzzle kit **100**.

[0026] In another embodiment, the embedded audio assembly **700** audibly annunciates a resultant color that is obtained when two or more colors are combined, when the puzzle pieces **101** marked with the indicia **102** corresponding to two or more colors are pressed sequentially or simultaneously. As an example, when the user presses a puzzle piece **101** marked with an indicia **102** B corresponding to the color blue and then presses a puzzle piece **101** marked with an indicia **102** Y corresponding to the color yellow, a message "green" is announced.

[0027] In another embodiment, the embedded audio assembly **700** audibly annunciates a mismatch when linking of the puzzle pieces **101** is incorrect. Each edge **101***a* of each of the puzzle pieces **101** comprises a sensor **705** for detecting a mismatch when the linking of the puzzle pieces **101** is incorrect. On detecting the mismatch, the sensor **705** sends a mismatch signal to the embedded audio assembly **700** in the puzzle pieces **101** for generating the audible mismatch message. For example, if a user places a leaf shaped puzzle piece **101** instead of a petal shaped puzzle piece **101** to create a picture of a flower, the embedded audio assembly **700** annunciates a message, for example, "Mismatch" or "Error". Similarly, if the edges **101***a* of the jigsaw puzzle pieces **601** as exemplarily illustrated in FIG. **6**A, do not mate with each other in a correct sequence to complete a picture, a message, for example, "Mismatch" is announced. When all the individual puzzle pieces **101** mate with each other in the correct sequence, a message, for example, "Match" is announced.

[0028] In another embodiment, each of the puzzle pieces **101** are marked with two indicia **102**, for example, B and Y corresponding to the color blue and the color yellow respectively. Furthermore, multiple removable translucent layers of different colors stacked one above the other are provided in the color chart **104**. When, for example, blue and yellow colored translucent layers from the color chart **104** are placed above each other on the puzzle pieces **101**, the resultant color, which is green, appears on the puzzle piece **101** when illuminated from the light source **706** embedded in the puzzle piece **101**.

[0029] FIG. **3** exemplarily illustrates a color chart **104** for the flower pot picture puzzle **103** illustrated in FIG. **2**B, displaying colors that correspond to the indicia **102** marked on the puzzle pieces **101** of the flower pot picture puzzle **103**. The color chart **104** shows the colors with corresponding indicia **106** by superimposing the indicia **106** color symbol, against a background of the colors. For example, indicia **106** of G would be superimposed against a green background in the color chart **104**. The color chart **104** for the picture puzzle **103** of FIG. **2**B displays indicia **106**, for example, W, G, Y, R, and B against background colors white, green, yellow, red, and blue respectively. The color chart **104** is different for each

picture puzzle kit **100**. In an embodiment, the color chart **104** comprises an embedded audio assembly **700** as exemplarily illustrated in FIG. **7** for audibly indicating colors and indicia **106** in the color chart **104** when pressure is applied on predefined areas of the color chart **104**. For example, on pressing the indicia **106** B or a blue colored area in the color chart **104**, the embedded audio assembly **700** annunciates the word "blue". In another example, when the user presses the indicia **106** G or a green colored area in the color chart **104**, the embedded audio assembly **700** annunciates the message "G for green". The user therefore infers that the indicia **106** G corresponds to the color green and may then color the puzzle piece **101** marked with the indicia **102** G with a green color using the coloring tools **105** provided in the picture puzzle kit **100**.

[0030] FIG. **4**A exemplarily illustrates puzzle pieces **101** comprising parts of a picture of an ice cream sundae. The puzzle pieces **101** are marked with the indicia **102** W, G, P, O, R, and B corresponding to the colors white, green, pink, orange, red, and blue respectively. The puzzle pieces **101** marked with the indicia **102** W, G, P, O, R, and B representing different colors, are placed adjacent to one another to assemble the ice cream sundae picture puzzle **103** as exemplarily illustrated in FIG. **4**B. One of the color charts **104** for the picture puzzle **103** of FIG. **4**B comprises the indicia **102** W, G, P, O, R and B against a background of the colors white, green, pink, orange, red, and blue respectively as exemplarily illustrated in FIG. **5**A. The user, for example, a child will then color the puzzle pieces **101** with colors based on the background colors displayed on the color chart **104**.

[0031] In an embodiment, the color chart **104** comprises a first indicia **501***a* corresponding to a first color, a non-indicative indicia **501***b* or **501***d* marked on a peelable layer **501***f* on the color chart **104**, a hidden second indicia **501***g* or **501***h* corresponding to a second color positioned below the peelable layer **501***f*, and a third indicia **501***c* or **501***e* corresponding to a resultant third color that will be obtained by mixing the first color and the second color represented by the first indicia **501***a* and the hidden second indicia **501***g* or **501***h* respectively as exemplarily illustrated in FIGS. **5**B-**5**C. The peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* is adjacent to and in removable contact with the hidden second indicia **501***g* or **501***h*. The peelable layer **501***f* is not marked with a color and is opaque and therefore the hidden second indicia **501***g* or **501***h* positioned below the peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* is not visible to the user as exemplarily illustrated in FIG. **5**B. The user is required to determine the second color represented by the hidden second indicia **501***g* or **501***h*, that needs to be mixed with the first color represented by the first indicia **501***a* on the color chart **104**, to obtain the resultant third color represented by the third indicia **501***c* or **501***e* on the color chart **104**, since there is no color marked on the non-indicative indicia **501***b* or **501***d*. If the user does not know the color represented by the non-indicative indicia **501***b* or **501***d*, the user can try to find the color represented by the non-indicative indicia **501***b* or **501***d* by trial and error, by mixing different colors with the first color represented by the first indicia **501***a* using the coloring tools **105** from the picture puzzle kit **100**. If the user fails to determine the second color, the user can remove the peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* to reveal the hidden second indicia **501***g* or **501***h* corresponding to the second color to be mixed with the first color for obtaining the resultant third color. FIG. **5**C exemplarily illustrates the peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* that when peeled, reveals the hidden second indicia **501***g* or **501***h*. The user may then mix the first color represented by the first indicia **501***a* with the second color represented by the hidden second indicia **501***g* or **501***h* using the coloring tools **105** from the picture puzzle kit **100** to produce the resultant third color represented by the third indicia **501***c* or **501***e*. The user can then color a puzzle piece **101** marked with indicia **102** corresponding to the third indicia **501***c* or **501***e* with the produced third color.

[0032] Consider an example of a color chart **104** as exemplarily illustrated in FIGS. **5**B-**5**C. The color chart **104** comprises a first indicia **501***a* marked "R" corresponding to the color red, a non-indicative indicia **501***b* marked "X_1" on a peelable layer **501***f* on the color chart **104**, a hidden second indicia **501***g* marked "Y" positioned below the peelable layer **501***f*, and a third indicia **501***c* marked "O" corresponding to the resultant color orange that will be obtained by mixing colors represented by the first indicia **501***a* and the hidden second indicia **501***g*. The peelable layer **501***f* marked with the non-indicative indicia **501***b* "X_1" is in removable contact with the hidden second indicia **501***g*. The peelable layer **501***f* is not marked with a color and is opaque and therefore the hidden second indicia **501***g* positioned below the peelable layer **501***f* marked with the non-indicative indicia **501***b* "X_1", is not visible to the user as exemplarily illustrated in FIG. **5**B. The user is required to determine the second color represented by the hidden second indicia **501***g*, that needs to be mixed with the color red represented by the first indicia **501***a* "R" on the color chart **104** to obtain the resultant color orange represented by the third indicia **501***c* "O" on the color chart **104**, since there is no color marked on the non-indicative indicia **501***b* marked "X_1". If the user does not know the color represented by the non-indicative indicia **501***b* marked "X_1", the user can try to find the color represented by the non-indicative indicia **501***b* marked "X_1" by trial and error, by mixing different colors with the color red represented by the first indicia **501***a* "R" using the coloring tools **105** from the picture puzzle kit **100**. The user can continue mixing different colors with the color red till the user finds that by mixing the color red with the color yellow not shown on the color chart **104** and marked by **501***b* "X_1", the resultant color produced is orange. The user can then use the produced orange color to color a puzzle piece **101** marked with indicia **102** "O". If the user cannot find the correct color to add to the color red to produce the color orange, the user can peel off the peelable layer **501***f* marked with non-indicative indicia **501***b* "X_1" to reveal the hidden second indicia **501***g* marked "Y" below the peelable layer **501***f* as exemplarily illustrated in FIG. **5**C. The hidden second indicia **501***g* marked "Y" corresponds to the color yellow on the color chart **104**. The user can then mix the color red represented by the first indicia **501***a* "R" and the color yellow represented by the hidden second indicia **50***g* "Y" using the coloring tools **105** to produce the color orange represented by the third indicia **501***c* "O" which the user can then use to color a puzzle piece **101** marked with indicia **102** "O".

[0033] Similarly, in another example, the color chart **104** illustrated in FIGS. **5**B-**5**C comprises a first indicia **501***a* marked "R" corresponding to the color red, a non-indicative indicia **501***d* marked "X_2" on a peelable layer **501***f* on the color chart **104**, a hidden second indicia **501***h* marked "W" positioned below the peelable layer **501***f*, and a third indicia

501*e* marked "P" corresponding to the resultant color pink that will be obtained by mixing colors represented by the first indicia **501***a* and the hidden second indicia **501***h*. The peelable layer **501***f* marked with the non-indicative indicia **501***d* "X_2" is in removable contact with the hidden second indicia **501***h*. The peelable layer **501***f* is not marked with a color and is opaque and therefore the hidden second indicia **501***h* positioned below the peelable layer **501***f* marked with the non-indicative indicia **501***d* "X_2", is not visible to the user as exemplarily illustrated in FIG. **5**B. The user is required to determine the second color represented by the hidden second indicia **501***h*, that needs to be mixed with the color red represented by the first indicia **501***a* "R" on the color chart **104** to obtain the resultant color pink represented by the third indicia **501***e* "P" on the color chart **104**, since there is no color marked on the non-indicative indicia **501***d* marked "X_2". If the user does not know the color represented by the non-indicative indicia **501***d* marked "X_2", the user can try to find the color represented by the non-indicative indicia **501***d* marked "X_2" by trial and error, by mixing different colors from the picture puzzle kit **100** with the color red represented by the first indicia **501***a* "R" using the coloring tools **105** from the picture puzzle kit **100**. The user can continue mixing different colors with the color red till the user finds that by mixing the color red with the color white not shown on the color chart **104** and marked by **501***d* "X_2", the resultant color produced is pink. The user can then use the produced pink color to color a puzzle piece **101** marked with indicia **102** "P". If the user cannot find the correct color to add to the color red to produce the color pink, the user can peel off the peelable layer **501***f* marked with non-indicative indicia **501***d* "X_2" to reveal the hidden second indicia **501***h* marked "W" below the peelable layer **501***f* as exemplarily illustrated in FIG. **5**C. The hidden second indicia **501***h* marked "W" corresponds to the color white on the color chart **104**. The user can then mix the color red represented by the first indicia **501***a* "R" and the color white represented by the hidden second indicia **501***h* "W" using the coloring tools **105** to produce the color pink represented by the third indicia **501***e* "P" which the user can then use to color a puzzle piece **101** marked with indicia **102** "P".

[0034] In another embodiment, the embedded audio assembly **700** in the puzzle pieces **101** or the color chart **104** audibly indicates multiple colors and a resultant color obtained by mixing the colors. For example, when a user presses a puzzle piece **101** marked with an indicia **102** "O" as exemplarily illustrated in FIG. **4**A or presses an indicia **501***c* "O" on the color chart **104** as exemplarily illustrated in FIG. **5**B, the speaker **701** of the embedded audio assembly **700** in the puzzle piece **101** or the color chart **104**, audibly annunciates a message "Red and yellow produces orange". The user may then use the coloring tools **105** that are mixable, for example, paints, inks, dyes, or pigments to mix the color red with the color yellow to produce the color orange to color a puzzle piece **101** marked with indicia **102** "O".

[0035] Similarly, when a user presses a puzzle piece **101** marked with an indicia **102** "P" as exemplarily illustrated in FIG. **4**A or presses an indicia **501***e* "P" on the color chart **104** as exemplarily illustrated in FIG. **5**B, the speaker **701** of the embedded audio assembly **700** in the puzzle piece **101** or the color chart **104**, audibly annunciates a message "Red and white produces pink". The user can then use the coloring tools **105** that are mixable, for example, paints, inks, dyes, or pigments to mix the color red with the color white to produce the color pink to color a puzzle piece **101** marked with indicia **102** "P".

[0036] The user may color the picture that has been assembled, in colors corresponding to the different colors displayed on the color chart **104** using the coloring tools **105** provided in the picture puzzle kit **100**. Each of the coloring tools **105** corresponds to one of the colors. The coloring tools **105** comprise, for example, crayons, inks, markers, dyes, pigments, or paints for example, acrylic paints, oil paints, water colors, finger paints, etc. The picture puzzle kit **100** further comprises brushes for painting the picture puzzle **103**. The base used to support the puzzle pieces **101** may also be painted using the coloring tools **105**. The user may color the picture before linking the puzzle pieces **101** or after linking the puzzle pieces **101** to assemble the picture puzzle **103**. The picture puzzle kit **100** may be used to entertain a user and the puzzle pieces **101** may also be used as a play thing and display item.

[0037] FIG. **6**A exemplarily illustrates jigsaw puzzle pieces **601** comprising parts of a picture of a flower. The jigsaw puzzle pieces **601** are marked with the indicia **102** W, G, Y, R, and B representing the colors white, green, yellow, red, and blue respectively. The flower picture puzzle **103** is assembled by interlocking the jigsaw puzzle pieces **601** as exemplarily illustrated in FIG. **6**B. The jigsaw puzzle pieces **601** are of different shapes and sizes. The indicia **102** marked on the jigsaw puzzle pieces **601** enable the user to color the jigsaw puzzle pieces **601** using the color chart **104** and the coloring tools **105**. The color chart **104** for the picture puzzle **103** of FIG. **6**B is exemplarily illustrated in FIG. **3**. The user uses the coloring tools **105** to apply the actual color on the jigsaw puzzle pieces **601**. The base may also be used for supporting the jigsaw puzzle pieces **601**.

[0038] FIG. **8** exemplarily illustrates a method of coloring puzzle pieces **101** of a picture puzzle **103** using indicia **102** marked on the puzzle pieces **101**. A picture puzzle kit **100** as explained in the detailed description of FIG. **1** is provided **801**. The picture puzzle kit **100** comprises a color chart **104** comprising a first indicia **501***a*, a non-indicative indicia **501***b* or **501***d*, a hidden second indicia **501***g* or **501***h*, and a third indicia **501***c* or **501***e* as explained in the detailed description of FIGS. **5**B-**5**C. The first indicia **501***a* corresponding to a first color. The non-indicative indicia **501***b* or **501***d* is marked on an opaque peelable layer **501***f* on the color chart **104**. The peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* is adjacent to and in removable contact with the hidden second indicia **501***g* or **501***h*. The hidden second indicia **501***g* or **501***h* corresponds to a second color and is positioned immediately below the peelable layer **501***f*. The hidden second indicia **501***g* or **501***h* corresponding to the second color is revealed on removing the peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* as exemplarily illustrated in FIG. **5**C. The third indicia **501***c* or **501***e* corresponds to a resultant third color that will be obtained by mixing the first color and the second color represented by the first indicia **501***a* and the hidden second indicia **501***g* or **501***h* respectively. The picture puzzle kit **100** further comprises coloring tools **105** comprising multiple mixable colors for coloring the puzzle pieces **101** using the mixable colors.

[0039] The user determines **802** the second color represented by the hidden second indicia **501***g* or **501***h* on the color chart **104**, that needs to be mixed with the first color represented by the first indicia **501***a* on the color chart **104** to obtain

the resultant third color represented by the third indicia **501***c* or **501***e* on the color chart **104**, by mixing multiple colors with the first color using the coloring tools **105** from the picture puzzle kit **100**. If the user does not know the color represented by the non-indicative indicia **501***b* or **501***d*, the user can try to find the color represented by the non-indicative indicia **501***b* or **501***d* by trial and error, by mixing different colors from the picture puzzle kit **100** with the first color represented by the first indicia **501***a* using the coloring tools **105**. If the user fails to determine the second color, the user can remove **803** the peelable layer **501***f* marked with the non-indicative indicia **501***b* or **501***d* to reveal the hidden second indicia **501***g* or **501***h* corresponding to the second color to be mixed with the first color for obtaining the resultant third color. The user then mixes **804** the first color represented by the first indicia **501***a* with the second color represented by the hidden second indicia **501***g* or **501***h* using the coloring tools **105** from the picture puzzle kit **100** to produce the resultant third color represented by the third indicia **501***c* or **501***e*. The user then colors **805** one or more of the puzzle pieces **101** marked with the indicia **102** corresponding to the third indicia **501***c* or **501***e* using the produced third color.

[0040] The foregoing examples have been provided merely for the purpose of explanation and are in no way to be construed as limiting of the invention disclosed herein. While the invention has been described with reference to various embodiments, it is understood that the words, which have been used herein, are words of description and illustration, rather than words of limitation. Further, although the invention has been described herein with reference to particular means, materials and embodiments, the invention is not intended to be limited to the particulars disclosed herein; rather, the invention extends to all functionally equivalent structures, methods and uses, such as are within the scope of the appended claims. Those skilled in the art, having the benefit of the teachings of this specification, may effect numerous modifications thereto and changes may be made without departing from the scope and spirit of the invention in its aspects.

I claim:

1. A picture puzzle kit for coloring a picture puzzle marked with indicia corresponding to a plurality of colors, comprising:

a plurality of puzzle pieces comprising parts of a picture, wherein said picture puzzle is assembled by linking said puzzle pieces, wherein said puzzle pieces are marked with said indicia corresponding to said colors;

a color chart for displaying a plurality of colors corresponding to said indicia marked on said puzzle pieces; and

a plurality of coloring tools for coloring said puzzle pieces using said colors displayed on said color chart corresponding to said indicia marked on said puzzle pieces;

whereby said picture puzzle kit enables a user to color said picture puzzle using said indicia marked on said puzzle pieces.

2. The picture puzzle kit of claim **1**, wherein said linking is performed by placing said puzzle pieces adjacent to one another.

3. The picture puzzle kit of claim **1**, wherein said puzzle pieces are shaped as jigsaw puzzle pieces for interlocking adjacent puzzle pieces.

4. The picture puzzle kit of claim **1**, wherein said color chart displays said colors with corresponding indicia by superimposing said corresponding indicia against a background of said colors.

5. The picture puzzle kit of claim **1**, wherein said coloring tools enable said user to color said puzzle pieces with colors corresponding to said colors displayed on said color chart.

6. The picture puzzle kit of claim **1**, wherein said coloring tools comprises one or more of paints, crayons, inks, markers, dyes, and pigments.

7. The picture puzzle kit of claim **1**, wherein said color chart comprises:

a first indicia corresponding to a first color;

a non-indicative indicia marked on a peelable layer on said color chart;

said peelable layer adjacent to and in removable contact with a hidden second indicia;

said hidden second indicia corresponding to a second color, wherein said hidden second indicia is positioned below said peelable layer, wherein said hidden second indicia corresponding to said second color is revealed on removing said peelable layer marked with said non-indicative indicia; and

a third indicia corresponding to a resultant third color that will be obtained by mixing said first color and said second color represented by said first indicia and said hidden second indicia respectively.

8. The picture puzzle kit of claim **1**, further comprising a plurality of removable layers stacked one above the other on each of said puzzle pieces, wherein one of said removable layers is removed for revealing another one of said removable layers below said one of said removed layers, wherein each of said removable layers is transparent and is marked with one of said indicia corresponding to one of said colors.

9. The picture puzzle kit of claim **8**, wherein said coloring tools provide translucent colors for coloring on said transparent removable layers, wherein said colored layers, when combined, form new colors.

10. The picture puzzle kit of claim **9**, further comprising a light source embedded in each of said puzzle pieces to illuminate said colored layers stacked on said each of said puzzle pieces.

11. The picture puzzle kit of claim **1**, further comprising a rub off removable layer provided on each of said puzzle pieces, wherein said rub off removable layer reveals one of said indicia corresponding to one of said colors.

12. The picture puzzle kit of claim **1**, wherein each of said puzzle pieces comprises an embedded audio assembly for audibly indicating color of said each of said puzzle pieces.

13. The picture puzzle kit of claim **12**, wherein said embedded audio assembly audibly indicates a resultant color obtainable by combining two or more colors when said puzzle pieces marked with said indicia corresponding to said two or more colors are pressed sequentially.

14. The picture puzzle kit of claim **12**, wherein said embedded audio assembly audibly indicates one or more of a plurality of characteristics of each of said puzzle pieces when said each of said puzzle pieces is pressed one or more times.

15. The picture puzzle kit of claim **12**, wherein each edge of each of said puzzle pieces comprises a sensor for detecting a mismatch when said linking of said puzzle pieces is incorrect, whereby a mismatch signal is sent to said embedded audio assembly for audibly indicating said mismatch.

16. The picture puzzle kit of claim **1**, further comprising a plurality of removable translucent layers of a plurality of colors stacked one above the other in said color chart, wherein when said translucent layers are placed above each other on one of said puzzle pieces, a resultant color obtainable by combining said colors appears on said one of said puzzle pieces on receiving illumination from a light source embedded in said one of said puzzle pieces.

17. The picture puzzle kit of claim **1**, wherein said color chart comprises an embedded audio assembly for audibly indicating said colors and said indicia in said color chart.

18. A picture puzzle kit comprising:

a plurality of puzzle pieces, each of said puzzle pieces having a length, a width, and a thickness, said thickness being small compared to said length and said width, each of said puzzle pieces defining an outside edge, said outside edge of each of said puzzle pieces being configured to mate with outside edges of at least two other of said puzzle pieces, and said puzzle pieces marked with indicia corresponding to a plurality of colors;

one or more color charts comprising said indicia, said one or more color charts displaying a plurality of colors corresponding to said indicia;

a plurality of coloring tools, each of said coloring tools corresponding to one of said colors; and

said puzzle pieces together defining a picture when said outside edge of each of said puzzle pieces are mated one to another and each one of said puzzle pieces is colored using one of said coloring tools corresponding to said one of said colors associated by said one or more color charts with said indicia marked on each of said puzzle pieces.

19. The picture puzzle kit of claim **18**, further comprising a plurality of removable layers stacked one above the other on each of said puzzle pieces, wherein one of said removable layers is removed for revealing another one of said removable layers below said one of said removed layers, wherein each of said removable layers is transparent and is marked with one of said indicia corresponding to one of said colors.

20. The picture puzzle kit of claim **18**, wherein said one or more color charts comprises an embedded audio assembly for audibly indicating said colors and said indicia in said one or more color charts, wherein said embedded audio assembly audibly indicates a said colors and a resultant color obtained by mixing said colors.

21. The picture puzzle kit of claim **18**, wherein each of said puzzle pieces comprises an embedded audio assembly for audibly indicating a plurality of characteristics of said each of said puzzle pieces when said each of said puzzle pieces is pressed one or more times, wherein said embedded audio assembly audibly indicates a plurality of colors and a resultant color obtained by mixing said colors.

22. A method of coloring puzzle pieces of a picture puzzle using indicia marked on said puzzle pieces, comprising the steps of:

providing a picture puzzle kit, comprising:

said puzzle pieces comprising parts of a picture, wherein said picture puzzle is assembled by linking said puzzle pieces, wherein said puzzle pieces are marked with said indicia corresponding to a plurality of colors;

a color chart for displaying a plurality of colors corresponding to said indicia marked on said puzzle pieces, wherein said color chart comprises:

a first indicia corresponding to a first color;

a non-indicative indicia marked on a peelable layer on said color chart;

said peelable layer adjacent to and in removable contact with a hidden second indicia;

said hidden second indicia corresponding to a second color, wherein said hidden second indicia is positioned below said peelable layer, wherein said hidden second indicia corresponding to said second color is revealed on removing said peelable layer marked with said non-indicative indicia;

a third indicia corresponding to a resultant third color that will be obtained by mixing said first color and said second color represented by said first indicia and said hidden second indicia respectively; and

a plurality of coloring tools for coloring said puzzle pieces using said colors displayed on said color chart corresponding to said indicia marked on said puzzle pieces;

determining said second color represented by said hidden second indicia on said color chart that needs to be mixed with said first color represented by said first indicia on said color chart to obtain said resultant third color represented by said third indicia on said color chart, by mixing a plurality of colors with said first color using said coloring tools from said picture puzzle kit;

removing said peelable layer marked with said non-indicative indicia to reveal said hidden second indicia corresponding to said second color to be mixed with said first color for obtaining said resultant third color, on failure to determine said second color;

mixing said first color with said second color using said coloring tools of said picture puzzle kit to produce said resultant third color; and

coloring one or more of said puzzle pieces marked with said indicia corresponding to said third indicia using said produced third color.

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