BLENDABLE STICK FOR COLORATION OF WOOD AND FURNITURE

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ABSTRACT
A device for repairing a wooden article comprised of a package including a plurality of elongated elements, said elements being comprised of wax and colorant, wherein at least several of said elements includes one of a different colorant, and including a device for shaping said elements. A method for repairing a surface comprising providing a kit including a plurality of coloring sticks of different colors, said coloring sticks being comprised of wax and colorant, applying a first layer of coloring stick to said surface, assessing color match of said first layer to said surface, applying a second layer of a second coloring stick to said surface and blending said first and second layers together using the heat and pressure of at least one finger, and optionally adding different layers to effect color matching.
FIG. 1
Heritage Cherry --'s unt Umber 2. Burnt Sienna 2. 2. % as O S Ginger Brown

Note: Colors directly across from each other are complimentary colors and when blended together will develop a "brown tone". Black and White are used to darken or lighten colors and are not considered true colors.

FIG. 3

FIG. 4
BLENDABLE STICK FOR COLORATION OF WOOD AND FURNITURE

BACKGROUND OF THE INVENTION

[0001] The present invention is directed to a wood repair device. More particularly, the present invention relates to a kit including a plurality of coloring elements suited for coloring a surface, such as a wood surface found on furniture, woodwork, cabinetry, floors, decking, and the like.

[0002] While wood is one of the primary materials utilized for the construction of articles, wood suffers from the drawback of being prone to scratching, dents and other physical impairments. Similarly, in the construction of wood articles, nail holes, dowel holes, and other manufacturing techniques can, on occasion, mar the surface of the wooden article. Since many wooden articles are waxed or stained to apply color in addition to that found in the natural wood pigmentation, damage, whether intentional or unintentional to the wooden surface, can remove at least a portion of the stain and/or wax coloration. Of course, the scratch or damage is often readily apparent to the observer.

[0003] Because of the extensive use of wood in a variety of articles, significant efforts have been invested into methodology for repair thereof. For example, it has been suggested that deep scratches can be hidden by carefully rubbing with a piece of oily nut meat, such as brazil nut, black walnut or pecan. Similarly, suggestions have been made to repair scratched furniture using old coffee. Alternatively, it has been suggested to color a scratch with a brown coloring crayon, liquid shoe dye, or iodine.

[0004] As a supplement to these household remedies, commercial wax filler sticks have been developed to fill small and medium holes and scratches. Wax filler sticks are typically hard wax sticks colored with native pigments in a variety of shades in order to closely match the color of the wood. Typically, these products recommend the selection of a wax filler stick that is nearest in color to the article of wood. Small pieces of wax can be removed via a knife and softened with heat and pressed in a softened state into the hole or scratch. Unfortunately, these products do not provide several important features, such as (i) ease of color blending, (ii) ease of workability (i.e. special equipment such as heaters may be required); or (iii) ease of color correction, for example, stains cannot be conveniently removed after application.

SUMMARY OF THE INVENTION

[0005] According to one embodiment, the present invention is directed to a device for repairing a wooden article. The device is comprised of a package including a plurality of elongated elements that are comprised of a wax including a colorant. At least a plurality of the elongated elements are of different colors. In addition, the device is provided with means for sharpening the elongated elements.

[0006] According to an alternative embodiment, the present invention is directed to a device for repairing a wooden article which includes at least six differently colored elements including white, black and shades of brown. It is noted that different colors can be achieved when different elements contain a greater or lesser loading of colorant providing a different overall shade to the element.

[0007] In a further embodiment of the invention, a device for repairing a wooden article is provided and is comprised of a package housing a plurality of elongated elements. The elongated elements are comprised of wax having a melting point below 100° C. and a colorant.

[0008] According to a further embodiment, the present invention is also applicable to a method of repairing a damaged wood surface using the above-described device.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of the inventive wood repair device in a closed position;

[0010] FIG. 2 is a perspective view of the inventive wood repair device in an open position.

[0011] FIG. 3 is a perspective view of the sharpening component of the inventive wood repair device; and

[0012] FIG. 4 is a plan view of the color blending chart component of the inventive wood repair device.

DETAILED DESCRIPTION

[0013] Although the invention is being described with particular reference to the specific embodiments and to the device shown in the appended figures, it is intended to encompass all aspects of the invention as described herein.

[0014] Referring now to FIG. 1, the wood repair device 10 is visually represented. Device 10 includes a transparent plastic housing 12 enclosing a plurality of elongated marking elements 14. While the housing 12 is depicted as transparent, alternative housing materials are also contemplated. Housing 12 includes a passage 16 facilitating the display of the device on a post hanger.

[0015] With reference now to FIGS. 1 and 2, housing 12 includes a hinge portion 18 facilitating the clam shell style opening and closing of the overall device, providing access to coloring elements 14. Coloring elements 14 are retained in individual chambers 26. The housing can be maintained in a closed position via locking elements 20 which include a protrusion 28 sized to frictionally mate with a recess 30.

[0016] Disposed within a recess 24 is sharpening element 22. Referring now also to FIG. 3, sharpening element 22 includes body portion 32 within which truncated conical openings 34 and 36 are provided. Blade elements (not shown) are positioned within openings 34 and 36 to facilitate the sharpening of the colored elements upon insertion and rotation into holes 34 and 36. Advantageously, the multi-sized holes allow the formation of broad and narrow tipped coloring elements. The narrow tip design particularly facilitates the coloration of thin scratches and the application of grain elements into the repair coloring.

[0017] With further reference to FIG. 4, device 10 also includes a color chart 38 which facilitates the selection of appropriate colors to achieve an appropriate color blend for color matching purposes.

[0018] According to a preferred form of the invention, the elongated coloring elements are comprised of a highly pigmented wax. The elements are particularly suited to repair or replace color stain or topcoat lost in a wood or a wood product substrate. The colored wax can be applied to the substrate and lightly blended into the wood, preferably
with a fingertip. Advantageously, the colors can be blended together. The product can be applied, then another color can be blended in with the first color and so on, until the desired color tone is achieved. Moreover, a finish color layer can be applied and if color match does not exist a second layer can be applied and mixed into the first layer by gentle rubbing of a fingertip. Proper selection of color shade allows the overall appearance of the repair layer to be properly tailored. Additionally, if a mistake is made, the product can simply be wiped off. After application, the colorant wax is preferably top coated with either a solvent or a water based coating.

[0019] The purpose of the product is to deliver a designated color to add back or change coloration of a wood, laminate, leather or plastic substrate. The product is designed to repair or replace color on a substrate requiring a small amount of touch up due to wear through use or other damage. The product can be further used for decorative use such as de-stressing.

[0020] The sticks can be formed by melting a wax product in a pot. A desired dry pigment combination can then be added under agitation of a small mixer and cowles type blade. The colorant is added to comprise between about 40 and 55% dry pigment load so as to deliver a maximum quantity of color to the substrate. Preferably, at least a 45% dry pigment load will be achieved. Once the color is matched to a standard, the liquid is poured into a chilled mold and extruded into sticks.

[0021] Preferred wax materials include those having a melting point below 105° C, more preferably, below 100° C. More preferably, the wax will have a melting point around 100° F, such that softening and potentially melting, can be achieved by contact with a human finger. In this manner, effective color blending can be achieved as discussed above. An exemplary stick can be comprised of a wax formed from a combination of soy wax, synthetic beeswax and polylactate 60 (such as Soy Wax Blend 305.2 from Koster Keunen, Inc., Watertown, Conn.). Exemplary powders in particular include titanium dioxide, (available from Rossi Pigment International), natural iron, red and yellow iron oxides, burnt sienna, burnt umber, raw umber, organic black, organic yellow, organic red and raven black (available, for example, from Bayer Pigment).

[0022] The pigment containing wood coloring device will have application in treating white finished edges or areas which during the finishing process have had color removed. Similarly, after a filler is used to fill a void in wood, the filler color can be treated with the present inventive device. Because the product can be applied directly, where needed and then blended, it is fast, easy and looks better than traditional powders or markers. To provide superior blending abilities, the kit will preferably include at least six differently colored elements. Preferably, the six elements will include the colors black and white and four brown shades ranging from (we could start with yellow, light or red and end with the opposite but unless we need to describe the colors it would be better to say (four wood tone shades of brown). The brown shades are provided to allow color matching (often by blends thereof) with black and white provided to facilitate darkening/lightening of the browns. In a particularly preferred form of the invention, a kit of at least twelve elements is provided. Furthermore, by including a black colored element, the present kit provides the ability to add light thin lines to simulate grain lines. The sharpening apparatus and the variety of colors provided allows this feature to be achieved.

[0023] Although the invention has been described with reference to exemplary embodiments, various changes and modifications can be made without departing from the scope and spirit of the invention. These modifications are intended to fall within the scope of the invention, as defined by the following claims.

1. A device for repairing a wooden article comprised of a package including a plurality of elongated elements, said elements being comprised of wax and colorant, wherein at least several of said elements includes one of a different colorant, and including a device for shaping said elements.

2. The device of claim 1, wherein said elongated elements are substantially cylindrical.

3. The device of claim 1, comprising at least 6 elongated elements.

4. The device of claim 3 comprised of at least 12 elongated elements.

5. The device of claim 1 wherein said device for shaping said elements comprises a body forming a truncated cone having a blade.

6. The device of claim 5, including two truncated cores of different sizes.

7. The device of claim 1 including a color blending chart.

8. The device of claim 1 wherein said elongated elements include white, brown and black colors.

9. The device of claim 1 wherein said wax has a melting point below about 105° C.

10. The device of claim 9 wherein said wax has a melting point below about 100° C.

11. The device of claim 10 wherein said wax has a melting point below about 100° C.

12. The device of claim 10 wherein said elongated elements include at least 40% by weight colorant.

13. The device of claim 1 wherein said elements include at least 50% by weight colorant.

14. A method for repairing a surface comprising providing a kit including a plurality of coloring sticks of different colors, said coloring sticks being comprised of wax and colorant, applying a first layer of coloring stick to said surface, assessing color match of said first layer to said surface, applying a second layer of said coloring stick to said surface and blending said first and second layers using the heat and pressure of at least one finger, and optionally adding additional layers to effect color matching.