United States Patent

Rosenheim

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[54] **PROCESS OF PREPARING AND APPLYING AN IMPROVED PAINTING DEVICE**

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[52] **U.S. Cl.**.....**156/230,** 156/239, 156/240, 161/167, 156/247

[51] **Int. Cl.**.....**B44c 1/10,** B44d 1/12

[58] **Field of Search**.....156/230, 239, 240, 237, 336

[56] **References Cited**

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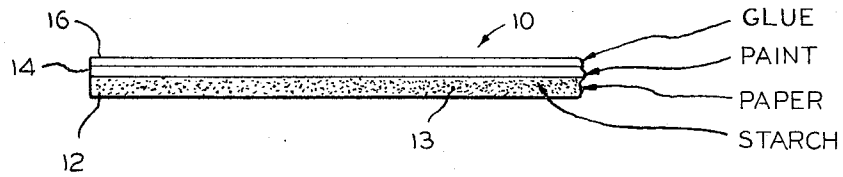
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Primary Examiner—Carl D. Quarforth
Assistant Examiner—Roger S. Gaither
Attorney—Alter, Weiss & Whitesel

[57] **ABSTRACT**

Painting devices and processes especially suitable for patching painted surfaces. The device comprises a releasable paint-coated paper, amenable to gluing onto surfaces requiring the patch.

4 Claims, 8 Drawing Figures



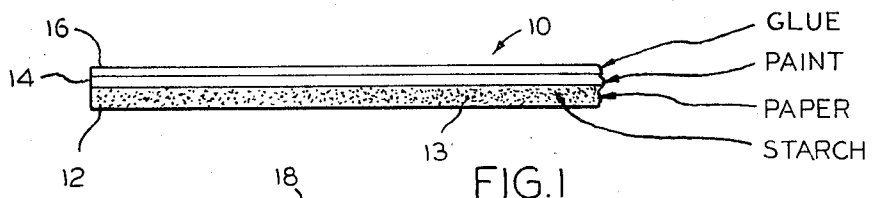


FIG.1

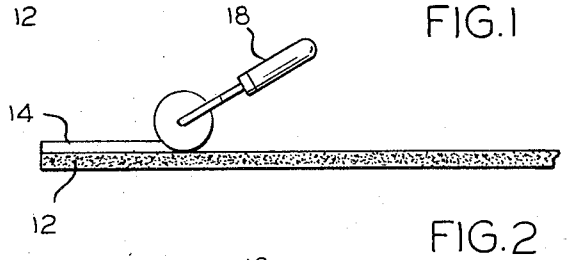


FIG.2

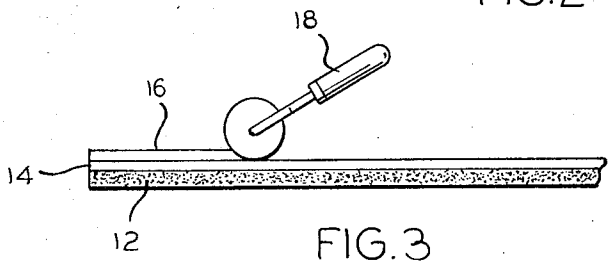


FIG.3

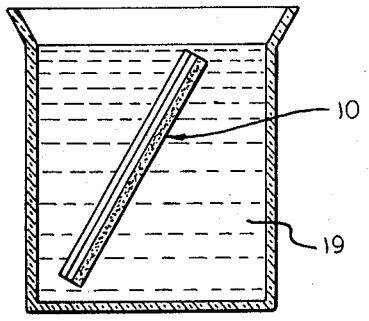


FIG.4

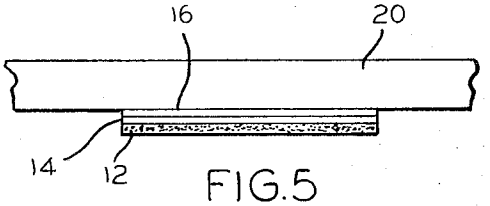


FIG.5

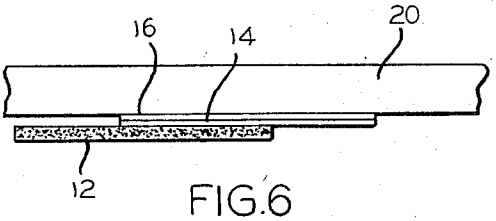


FIG.6

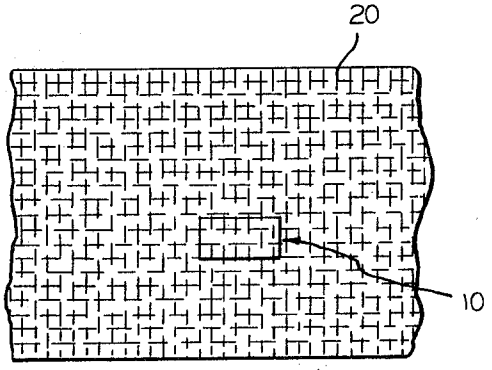


FIG.8

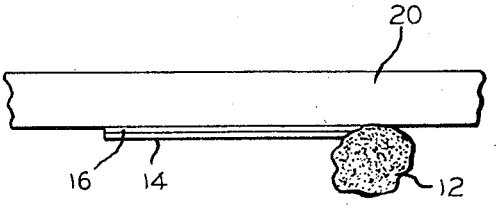


FIG.7

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PROCESS OF PREPARING AND APPLYING AN IMPROVED PAINTING DEVICE

This invention relates to devices and processes for applying esthetic protective coatings and more particularly, to painting devices and processes for applying paint that is especially useful for retouching previously painted surfaces.

Painted surfaces often require patching or retouching to cover scratches, or the like. It is extremely difficult to patch the previously coated surface in a manner such that the patch blends in with the previously coated surface. The difficulty is especially increased if the surface being patched is a glossy type surface such as that used in the automobile industry.

When the coat of paint on an automobile is scratched, for example, it now can be patched with presently available means. These include containers with the matching paint and small brushes for applying the pain to the scratched surface. The matching paint is brushed on to the scratched surface. A drawback in this method of patching painted surfaces is the inconsistency in the paint thickness which almost invariably occurs. In addition, it is difficult to prevent brush marks from showing.

Another device for applying paint to cover scratches or the like, in common use are spray containers containing matching paint. A drawback in these devices again are the difficulty in obtaining the proper thickness of the paint. In addition, there is a problem of preventing the sprayed paint from "running."

Accordingly, an object of the present invention is to provide improved painting devices and processes for applying paint in patches to already coated surfaces.

Yet another object of the present invention is to provide means for patching already coated surfaces which means do not entail the use of wet paints.

A preferred embodiment of the present invention comprises a laminated painting device. The device is fabricated from a detachable or releasable base surface, such as starch-impregnated paper, covered by a film or coat of paint of the color and thickness desired. The paint, in turn, is covered by a water-activated adhesive or even a pressure-sensitive adhesive. The patch is applied to the damaged surface by soaking the device in water to activate the adhesive, placing it over the surface as desired and slipping off the detachable paper base backing. If desired, the peripheral surfaces of the newly applied paint can be rubbed down using a rubbing compound for rubbing and cutting down the edges of the paint film.

The above mentioned and other features and objects of this invention and the manner of obtaining them will become more apparent, and the invention itself will be best understood by reference to the following description of an embodiment of the invention taken in conjunction with the accompanying drawings, wherein:

FIG. 1 shows in block form the improved painting device; and

FIGS. 2–7 show steps in the process of fabricating the improved painting device and of applying the improved painting device in patching a damaged portion of a previously painted surface,

FIG. 8 shows a painted surface retouched with an improved painting device.

In the accompanying drawings, like characters of reference refer to like parts throughout the several views. Referring now to the drawings, the improved painting device is generally designated by the numeral **10**. It is shown as comprising a base strip **12** forming a removable foundation for the device. The criteria of the base strip is that it must hold the paint for conveying purposes but must be capable of being removed from the paint leaving a film of paint on a surface.

It has been found that an ideal base strip is paper designated as Simplex 76 to 100 lb. weight. The paper is impregnated with starch, shown by dots, such as **13**, and then calendered smooth. A film of paint on the base strip is designated by the number **14**. A preferred paint used in making the paint film is an alkyd resin enamel, such as Dupont's new "Dulux" paint.

The painted surface is then coated with a water-actuated adhesive. The adhesive coating is designated by numeral **16**.

One example of such an adhesive is a solution comprising 35 percent polyvinyl acetate, such as Monosanto Gelva Emulsion S–98, 3 percent dibutyl phtyalate, 37 percent dextrine 42 TvvL, and 4 percent glycerine. The glycerine acts as a plasticizer for curing the adhesive and the dextrine 42 acts to strengthen the adhesive mixture.

Another adhesive or cement formula for use in coating the paint is a solution comprising 15 percent trichlorethlene, 5 percent dibutyl phthalate, 50 percent polyvinyl acetate homopolymer emulsion, such as Bordons Polyco 694, 5 percent polyvinyl acetate copolymer emulsion, such as Bordons Polyco 2105, 10 percent polyvinyl alcohol such as Bordons Lemol 5–88, and 15 percent water.

The adhesive is allowed to dry, and the improved painting device is then ready for shipment. The improved painting device is preferably made on large sheets or rolls of paper. When it is used, a section of the laminated painting device of the size desired is cut from the large sheet or roll and applied to the area requiring the patching.

FIGS. 2–7 show a process of steps for fabricating the improved painting device and for applying the said improved painting device in patching a surface requiring repairs, such as the surface of an automobile.

Step 1 (FIG. 2) shows the base paper **12** being coated with a film of paint **14** using a roller, such as roller **18**. The paint, of course, could be applied to the base by using other means, such as brushing or spraying.

Step 2 (FIG. 3) is the application of the adhesive **16** to the surface of the paint previously applied to the base **12**. Here again, a roller such as roller **18** is shown being used. However, other means for applying the glue can be used.

Step 3 (FIG. 4) shows the step in using the improved painting device. Here a strip of the improved painting device **10**, cut to size, is shown dipped in water **19** to activate the adhesive coating **16** on the paint surface **14**.

Step 4 (FIG. 5) shows the improved painting device applied to a surface **20**. The device is merely pressed onto the surface, where the patch is desired.

Step 5 (FIG. 6) shows the removal of the base member **12**. This is done by sliding the base member **12** away from the film of paint **14**, leaving the film of paint **14** cemented to the surface of **20** by glue **16**.

Step 6 (FIG. 7) shows the optional step of rubbing down the peripheral edges of the paint patch so applied. A wad of paper; in a preferred embodiment of the process, the release paper that has been removed, or any other paper sheet is dipped into an abrasive compound for use in expeditiously rubbing down the peripheral edges of the patch.

An abrasive compound found to facilitate the rubbing process comprises mixture that is made up of 30 percent ethylene glycol monobutyl ether, 30 percent acetone, 5 percent petroleum jelly and 45 percent fine ground pumice stone. This is mixed until it resembles wet dough. The wad **21** of release paper is rubbed in wet dough and used for grinding down the peripheral edges of the paint patch to form an invisible patch whose peripheral edges are invisible to the naked eye.

FIG. 8 shows the surface **20** retouched with the improved painting device **10**.

While the invention has been described as being used for retouching damaged paint surfaces, it is not restricted to this use. It can be used for originally coating surfaces as desired.

Although I have shown a specific arrangement of the parts and features constituting my device, I am fully cognizant of the fact that many changes may be made in the parts and features, without effecting the performance of the device, and I reserve the rights to make such changes as I may deem convenient and necessary without departing from the spirit of my invention or the scope of the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent in the United States is:

1. A process for preparing and applying an automobile paint retouching device, said process comprising the steps of:

a. preparing a base sheet of backing material having a surface with an activated paint release characteristic,
b. applying a layer of paint which matches an automobile's original paint to said surface of said backing material, said paint layer having a characteristic which responds by having an improved feathered edge surface when rubbed by a rubbing compound,
c. allowing said paint layer to dry,
d. applying a layer of adhesive over said paint, said layer having a characteristic which may be activated and reactivated without damage to or resoftening of either said original paint or said layer of paint,
e. cutting the painting device to size
f. reactivating said adhesive layer,
g. pressing the reactivated adhesive layered side of said painting device on the surface being painted, and
h. removing the base sheet of said painting from the layer of paint.

2. The process of claim 1 in which said adhesive is soluble in liquid and the step of reactivating said adhesive consists of soaking said cut painting device for a prescribed period of time in said liquid.

3. The process of applying paint for retouching painted surfaces, comprising the steps of:
calendering a sheet of starch impregnated paper,
applying a layer of paint to one side of said calendered starch impregnated paper,
allowing said paint to dry,
applying a layer of water activated adhesive to said dried layer of paint to form a laminated sheet,
allowing said adhesive to dry,
cutting said laminated sheet to obtain a piece of a desired patch size for retouching,
moistening said cut piece to activate said adhesive,
pressing said cut piece with adhesive side juxtaposed to the portion of the painted surface being retouched, and
removing the paper leaving the layer of paint retouching the surface.

4. The process of claim 1 including the step of rubbing the peripheral edges of said newly applied paint to blend the edges with the surface being retouched.

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