

Description

The present invention relates to a process for making generally elongated decorative articles and to the articles made by this process and, more particularly, to a process and article in which a fluent plastic composition is cast onto a substrate in an elongated area which varies in width and/or shape.

Trim strips of various configurations and decorative articles and emblems have been used in the automotive industry to decorate and protect automobile body surfaces, and other surfaces in the passenger compartment. In recent years, emphasis has been placed on the use of plastic trim strips which do not corrode and which can be adhesively attached to the automobile body without fasteners.

One such trim strip is shown in U.S. Patent No. 4,446,179, issued May 1, 1984, to Waugh and assigned to us. Waugh discloses a decorative trim strip which may consist of an elongate decorative foil member having thereon an impact-resistant overlay having radiused edges and providing a lens effect to the foil member. An adhesive is used to bond the trim strip to the surface to be decorated. Another trim strip is shown in U.S. Patent No. 4,560,596, issued December 24, 1985, to Coscia, and also assigned to us. Coscia discloses a trim strip which includes a foil member whose upper surface is provided with a decorative pattern. The upper surface is partially covered by a weather-resistant and impact-resistant plastic overlay having radiused edges and providing a lens effect to the foil member. The plastic overlaid section of the foil member is essentially coextensive with the width of the automotive body component to be decorated. When the trim strip is applied to the body component, the uncovered end portions of the foil member are wrapped around the component.

Recently, interest has arisen in utilizing decorative articles to cover large, irregularly shaped surface areas and components on an automobile. Previously, trim strips of the type shown in the Waugh and Coscia patents have been of a constant width and shape. This facilitates uniform casting of a fluent plastic composition onto the foil member prior to curing the composition to form the plastic overlay. When a decorative article which varies in width or shape is to be produced by casting a fluent plastic composition onto a substrate, ensuring that proper amounts of the composition are deposited on all portions of the substrate is important. One technique which has been used in the past to cast a fluent composition on a substrate in an irregular pattern is disclosed in U.S. Patent No. 4,409,264, issued October 11, 1983, to Gilleo et al, and U.S. Patent No. 4,468,425, issued August 28, 1984, to Gilleo et al. The Gilleo et al patents

suggest that an irregularly shaped area defined by a pattern of a low surface energy compound such as a fluorochemical, printed on the substrate surface, can receive a quantity of a liquid resin. The substrate is then wobbled or tipped in various directions, causing the liquid resin to flow over the irregularly shaped area to the area boundaries. While this may be an acceptable technique to use with some area shapes, it is not effective when the area to be covered with a fluent composition is significantly elongated.

Thus it is seen that there is a need for an improved process for making a decorative article in which an elongated substrate area of varying width and/or shape is cast with a fluent composition, and for an improved decorative article made by such process.

A process according to the present invention for making decorative articles comprises the steps of a) providing a substrate having an effective edge in a closed pattern on the surface thereof, which edge circumscribes an elongate area of varying width and/or shape on said surface, b) casting a fluent plastics composition from a casting head onto said substrate within said elongate area by providing relative movement between said casting head and said substrate while casting amounts of said fluent plastics composition on portions of said area in relation to the width and/or shape of such portions, said substrate being held substantially flat such that said fluent plastics composition flows to said effective edge and forms a positive meniscus, and c) curing said plastics composition to form a clear plastics cap over said area and thereby optically enhance the appearance of said substrate as viewed through said clear plastics cap.

The edge may be formed by a coating of an essentially non-wettable material in a pattern which is peripherally contiguous with the area. The substrate may be any elongate surface which is flat, or capable of being held flat during casting and curing. It may be a formed metal or a molded extruded or cast plastics which is rigid or semi-rigid; although, preferred is a flexible foil member, such as a metal foil or a metallised plastics foil, or a flexible plastics foil. The clear plastics cap may be formed of a flexible, abrasion-resistant polyurethane. The casting head may be a programmed articulated head, or a series of casting heads which are manipulated in conjunction with one another to deposit the fluent plastics composition over the area.

The relative movement between the casting head and substrate may be in a direction generally parallel to the direction of elongation of the area. The casting head may be stationary and the substrate may be moved therebeneath. The rate of relative movement between the substrate and the

casting head may be substantially constant and the fluent plastics composition may be dispensed from the casting head at a varying rate in dependence upon the width of the area. The rate of relative movement between the substrate and the casting head may vary in dependence upon the width of the area with the fluent plastics composition being dispensed from the casting head at a substantially constant rate.

The substrate may include a layer of adhesive material on the side thereof opposite to the side upon which the fluent plastics composition is cast.

A decorative article according to the present invention for covering an elongate automotive component includes a flexible substrate, an essentially non-wettable material forming a closed edge pattern on the substrate, the edge pattern circumscribing an elongate area on the substrate and defining a margin area of generally uniform dimension surrounding the area, the elongate area changing in width and/or shape from one end thereof to the other end, a cured, clear plastics cap within the elongate area on the substrate, which enhances the appearance of the substrate as viewed through the cap, and means for mounting the article on the elongate automotive component to provide a decorative covering therefore, with the margin area being wrapped around the edges of the component.

In the preferred embodiments, the substrate may be a flexible foil member, such as a metal foil or metallized plastics foil, or a flexible plastics member; although, a rigid or semi-rigid plastics or metal may be used in other embodiments. The clear plastics cap may be formed of a flexible, abrasion-resistant polyurethane. The means for mounting may include a layer of adhesive material on the side of the substrate opposition to the side upon which the fluent plastics composition is cast. The adhesive material may comprise a pressure sensitive adhesive.

In order that the invention may be more readily understood, reference will now be made to the accompanying drawings in which:

Fig. 1 is a top view of a decorative article constructed according to an embodiment of the present invention;

Fig. 2 is an enlarged end view of the decorative article, as seen looking right to left in Fig. 1;

Fig. 3 is a sectional view, illustrating the decorative article as it is applied to an automotive component;

Fig. 4 is a perspective view illustrating a first embodiment of the process of the present invention;

Fig. 5 is a perspective view illustrating a second embodiment of the process of the present invention;

Fig. 6 is a perspective view illustrating a third

embodiment of the process of the present invention;

Fig. 7 is a perspective view illustrating a fourth embodiment of the process of the present invention;

Fig. 8 is a perspective view illustrating a fifth embodiment of the process of the present invention; and

Fig. 9 is a top view, similar to Fig. 8, illustrating the fifth embodiment of the process of the present invention.

Reference is made to Figs. 1-3 which illustrate a decorative article 10 embodying the present invention. This article comprises a flexible substrate 12 upon which is mounted a cured, clear plastics cap 14. The plastics cap 14, approximately 1.27mm (50 mils) in thickness, provides a lens effect over the substrate 12. This enhances the appearance of any design or other ornamentation which may be provided on the surface of the substrate beneath the cap 14. Additionally, it has been found that the cap 14 provides an enhanced appearance for the article even if the surface of the substrate 12 is devoid of design or ornamentation.

The flexible substrate 12 may be formed of one of a number of substrate materials, including a flexible foil, a metallized plastics foil, or a flexible plastics material, such as for example a 0.051mm (2 mil) thick layer of vinyl. Likewise, as mentioned, alternative embodiments may utilize a substrate which is rigid or semi-rigid, such as a formed metal or cast, extruded or molded plastics. As long as the substrate is flat, or capable of being held flat during casting and curing, and the plastics composition of plastics cap 14 adheres thereto, it may be used. The plastics cap 14 is preferably formed by casting a fluent plastics composition onto the substrate 12, as discussed below in detail. To retain the fluent plastics composition in the desired position during the casting operation and during subsequent curing, an essentially non-wettable material 16 forming a closed edge pattern is provided on the substrate 12. The thickness of material 16 is exaggerated in Figs. 2 and 3 for purposes of clarity. The edge pattern circumscribes an elongate area 18 on the substrate and defines a margin area 20 of generally uniform dimension surrounding the elongate area 18. The elongate area 18 increases in width from one end thereof to the other end.

The essentially non-wettable material 16 may be any one of a number of materials which are known to limit the flow of a fluent plastic composition over a substrate surface, such as various fluorinated polymers. A number of suitable materials are discussed in U.S. Patent No. 4,409,264, issued October 11, 1983, to Gilileo et al. Alternatively, an effective edge to preclude the flow of the fluent composition over the substrate surface

may be provided by means of a ridge which is mechanically embossed or otherwise formed in the substrate 12.

The cast plastic composition forming the clear plastic cap 14 is a thermosetting material which is weather-resistant and does not yellow or cloud as a result of prolonged exposure to sunlight and which withstands strong detergent. The cast plastic should also be resistant to abrasion and impact. A number of plastics can be used for this purpose, but one which is particularly advantageous because it satisfies all of the above needs is an impact-resistant polyurethane. Other plastics, such as acrylics and epoxies also may be used. The plastic composition preferably is cured by heat or ultraviolet radiation. Depending on the plastic used, other means such as R.F. heating and air drying may be used to harden the plastic material.

The decorative article 10 further includes a means for mounting the article, such as for example a layer 22 of adhesive material on the side of the substrate opposite the cap 14. The adhesive may preferably be a pressure sensitive adhesive. Such an adhesive may be covered with a liner sheet carrying a layer of release material until such time as the article 10 is to be applied to a support surface. Fig. 3 depicts the decorative article 10 mounted on an automotive component 24 which may, for example, be the external vertical pillar which is just to the rear of the front doors of many passenger automobiles. It should be noted that the margin area 20 overlaps the edges of the component 24, providing a neat appearance and facilitating the application of the article 10 to the component.

Reference is now made to Figs. 4-9 which depict a number of embodiments of the process according to the present invention for making the decorative article illustrated in Figs. 1-3. With each embodiment, a substrate 12 having an effective edge 26 in a closed pattern on the surface of the substrate is provided. The effective edge 26 circumscribes the elongated area 18 on the surface onto which the plastic composition is to be cast. This edge may be an embossed ridge or a strip of non-wettable material. The fluent plastic composition is then cast from a casting head 28 onto the substrate within the elongated area 18. Relative movement is provided between the casting head and the substrate in a direction generally parallel to the direction of elongation of the area 18 while casting amounts of the fluent plastic composition on portions of the area in relation to the widths of the portions. The substrate 12 is held substantially flat such that the fluent plastic flows to the effective edge 26 and forms a positive meniscus. Finally, the plastic composition is cured to form the clear plastic cap 14 which provides the desired lens effect.

In the embodiment of the process shown in Fig. 4, a casting head having a single nozzle 20 is caused to move in two axes so as to cast the plastic material within the area 18. The substrate 12 is maintained stationary during the casting operation. As shown in Fig. 5, however, the casting head 28 may be held stationary while the substrate 12 is moved therebeneath as required to produce an even distribution of the plastic material in area 18. Note that the casting head 28 in Fig. 5 includes multiple nozzles 30. In the embodiment of Fig. 6, the substrate 12 is translated in a direction shown by arrow 32 while the nozzles 30 of casting head 28 are shifted laterally as shown by arrow 34 so as to cast the fluent plastic material into the elongated area 18. In the embodiments of Figs. 4-6 controlled movement of the casting head may be effected by means of an articulated head under computer control. It will be appreciated that the specific movement of the head 28 will vary depending upon the shape of the area 18 into which fluent plastic is to be cast.

In the embodiment of Fig. 7, the head 28 is maintained stationary while the substrate is translated beneath nozzles 30 at a uniform speed. It will be noted that the shape of the area 18 is such that its width varies significantly from end to end. To provide for uniform casting of the fluent plastic into the area 18, the casting pump 36 is driven at varied speeds by the motor 38 as each successive zone passes beneath the nozzles 30. The pump 36 is driven at higher speeds to effect casting of greater quantities of the plastic composition into the wider zones. The composition then flows laterally to the edges of the zones, effecting uniform coverage over area 18.

Finally, Figs. 8 and 9 depict an embodiment in which a pair of programmed articulated heads 28 and 28' are moved laterally while the substrate 12 passes beneath the nozzles in a direction indicated by arrow 40. Note that as the nozzles pass over portions of the area 18 which are somewhat narrower they are caused to overlap. The flow of fluent plastic composition to the nozzles 30 may preferably be reduced when substantial overlap occurs to prevent the casting of excess plastic onto the narrower portions of area 18.

Claims

1. A process for making decorative articles (10), comprising:
 - a) providing a substrate (12) having an effective edge (16) in a closed pattern on the surface thereof, which edge circumscribes an elongate area (18) of varying width and/or shape on said surface,
 - b) casting a fluent plastics composition from

may be provided by means of a ridge which is mechanically embossed or otherwise formed in the substrate 12.

The cast plastic composition forming the clear plastic cap 14 is a thermosetting material which is weather-resistant and does not yellow or cloud as a result of prolonged exposure to sunlight and which withstands strong detergent. The cast plastic should also be resistant to abrasion and impact. A number of plastics can be used for this purpose, but one which is particularly advantageous because it satisfies all of the above needs is an impact-resistant polyurethane. Other plastics, such as acrylics and epoxies also may be used. The plastic composition preferably is cured by heat or ultraviolet radiation. Depending on the plastic used, other means such as R.F. heating and air drying may be used to harden the plastic material.

The decorative article 10 further includes a means for mounting the article, such as for example a layer 22 of adhesive material on the side of the substrate opposite the cap 14. The adhesive may preferably be a pressure sensitive adhesive. Such an adhesive may be covered with a liner sheet carrying a layer of release material until such time as the article 10 is to be applied to a support surface. Fig. 3 depicts the decorative article 10 mounted on an automotive component 24 which may, for example, be the external vertical pillar which is just to the rear of the front doors of many passenger automobiles. It should be noted that the margin area 20 overlaps the edges of the component 24, providing a neat appearance and facilitating the application of the article 10 to the component.

Reference is now made to Figs. 4-9 which depict a number of embodiments of the process according to the present invention for making the decorative article illustrated in Figs. 1-3. With each embodiment, a substrate 12 having an effective edge 26 in a closed pattern on the surface of the substrate is provided. The effective edge 26 circumscribes the elongated area 18 on the surface onto which the plastic composition is to be cast. This edge may be an embossed ridge or a strip of non-wettable material. The fluent plastic composition is then cast from a casting head 28 onto the substrate within the elongated area 18. Relative movement is provided between the casting head and the substrate in a direction generally parallel to the direction of elongation of the area 18 while casting amounts of the fluent plastic composition on portions of the area in relation to the widths of the portions. The substrate 12 is held substantially flat such that the fluent plastic flows to the effective edge 26 and forms a positive meniscus. Finally, the plastic composition is cured to form the clear plastic cap 14 which provides the desired lens effect.

In the embodiment of the process shown in Fig. 4, a casting head having a single nozzle 20 is caused to move in two axes so as to cast the plastic material within the area 18. The substrate 12 is maintained stationary during the casting operation. As shown in Fig. 5, however, the casting head 28 may be held stationary while the substrate 12 is moved therebeneath as required to produce an even distribution of the plastic material in area 18. Note that the casting head 28 in Fig. 5 includes multiple nozzles 30. In the embodiment of Fig. 6, the substrate 12 is translated in a direction shown by arrow 32 while the nozzles 30 of casting head 28 are shifted laterally as shown by arrow 34 so as to cast the fluent plastic material into the elongated area 18. In the embodiments of Figs. 4-6 controlled movement of the casting head may be effected by means of an articulated head under computer control. It will be appreciated that the specific movement of the head 28 will vary depending upon the shape of the area 18 into which fluent plastic is to be cast.

In the embodiment of Fig. 7, the head 28 is maintained stationary while the substrate is translated beneath nozzles 30 at a uniform speed. It will be noted that the shape of the area 18 is such that its width varies significantly from end to end. To provide for uniform casting of the fluent plastic into the area 18, the casting pump 36 is driven at varied speeds by the motor 38 as each successive zone passes beneath the nozzles 30. The pump 36 is driven at higher speeds to effect casting of greater quantities of the plastic composition into the wider zones. The composition then flows laterally to the edges of the zones, effecting uniform coverage over area 18.

Finally, Figs. 8 and 9 depict an embodiment in which a pair of programmed articulated heads 28 and 28' are moved laterally while the substrate 12 passes beneath the nozzles in a direction indicated by arrow 40. Note that as the nozzles pass over portions of the area 18 which are somewhat narrower they are caused to overlap. The flow of fluent plastic composition to the nozzles 30 may preferably be reduced when substantial overlap occurs to prevent the casting of excess plastic onto the narrower portions of area 18.

Claims

1. A process for making decorative articles (10), comprising:
 - a) providing a substrate (12) having an effective edge (16) in a closed pattern on the surface thereof, which edge circumscribes an elongate area (18) of varying width and/or shape on said surface,
 - b) casting a fluent plastics composition from



a casting head (28) onto said substrate (12) within said elongate area (18) by providing relative movement between said casting head (28) and said substrate (12) while casting amounts of said fluent plastics composition on portions of said area in relation to the width and/or shape of such portions, said substrate (12) being held substantially flat such that said fluent plastics composition flows to said effective edge (16) and forms a positive meniscus, and

c) curing said plastics composition to form a clear plastics cap (14) over said area (18) and thereby optically enhance the appearance of said substrate (12) as viewed through said clear plastics cap (14).

2. The process claimed in claim 1, which includes forming said edge (16) by a coating of an essentially non-wettable material in a pattern which is peripherally contiguous with said area (18).

3. The process claimed in claim 1 or 2, wherein said substrate (12) is a flexible foil member.

4. The process claimed in claim 3, wherein said flexible foil member is metal foil, or metallized plastics foil.

5. The process claimed in claim 1 or 2, wherein said substrate (12) is a flexible plastics member.

6. The process claimed in any preceding claim, wherein said clear plastics cap (14) is formed of a flexible, abrasion-resistant polyurethane.

7. The process claimed in any preceding claim, wherein said casting head (28) is a programmed articulated head.

8. The process claimed in any of claims 1 to 6, which includes manipulating a series of casting heads (28) in conjunction with one another to deposit said fluent plastics composition over said area (18).

9. The process claimed in any of claims 1 to 6, which includes maintaining said casting head (28) stationary and moving the substrate (12) therebeneath.

10. The process claimed in any preceding claim, which includes maintaining the rate of relative movement between said substrate (12) and said casting head (28) substantially constant, and dispensing the fluent plastics composition

from said casting head at a varying rate in dependence upon the width of said area (18).

11. The process claimed in any of claims 1 to 9, which includes varying the rate of relative movement between said substrate (12) and said casting head (28) in dependence upon the width of said area (18), and dispensing the fluent plastics composition from said casting head at a substantially constant rate.

12. The process claimed in any preceding claim, in which said substrate includes a layer of adhesive material (22) on the side thereof opposite to the side upon which said fluent plastics composition is cast.

13. The process claimed in any of claims 1 to 6, which includes simultaneously casting said fluent plastics composition onto said substrate from a plurality of casting heads (28, 28').

14. The process claimed in any preceding claim, which includes providing relative movement between said casting head (28) and said substrate (12) in a direction generally parallel to the direction of elongation of said area (18).

15. A decorative article (10) for covering an elongate automotive component (24), comprising:

a flexible substrate (12),

an essentially non-wettable material (16) forming a closed edge pattern on said substrate, said edge pattern circumscribing an elongate area (18) on said substrate and defining a margin area (20) of generally uniform dimension surrounding said elongated area, said elongate area (18) changing in width and/or shape from one end thereof to the other end,

a cured, clear plastics cap (14) within said elongate area on said substrate over said substrate, which enhances the appearance of said substrate as viewed through said clear plastics cap, and

means (22) for mounting the article (10) on said elongate automotive component (24) to provide a decorative covering therefore, with said margin area (20) being wrapped around the edges of said component.

16. The article claimed in claim 15, wherein said substrate (12) is a flexible foil member.

17. The article claimed in claim 16, wherein said flexible foil member is metal foil, or metallized plastics foil.



18. The article claimed in claim 15, wherein said substrate (12) is a flexible plastics member.

19. The article claimed in any of claims 15 to 18, wherein said clear plastics cap (14) is formed of a flexible, abrasion-resistant polyurethane.

20. The article claimed in any of claims 15 to 19, in which said means (22) for mounting includes a layer of adhesive material on the side of said substrate (12) opposite to the side upon which said fluent plastics composition is cast.

21. The article claimed in claim 20 in which said adhesive material comprises a pressure sensitive adhesive.

Patentansprüche

1. Verfahren zur Herstellung von Dekorationsgegenständen (10), bei dem man

a) ein Substrat (12) mit einer wirksamen Kante (12) in einer geschlossenen Vorlage auf dessen Oberfläche vorsieht, wobei die Kante einen länglichen Bereich (18) variierender Breite und/oder Form auf dieser Oberfläche umschreibt,

b) eine fließende Kunststoffzusammensetzung aus einem Gießkopf (28) auf das Substrat (12) innerhalb des länglichen Bereiches (18) gießt, indem man eine Relativbewegung zwischen dem Gießkopf (28) und dem Substrat (12) während des Gießens von Mengen der fließenden Kunststoffzusammensetzung auf Abschnitte dieses Bereiches in Relation zu der Breite und/oder Form dieser Abschnitte vorsieht, wobei das Substrat (12) im wesentlichen derart flach gehalten wird, daß die fließende Kunststoffzusammensetzung zu der wirksamen Kante (16) fließt und einen positiven Meniskus bildet, und

c) die Kunststoffzusammensetzung unter Bildung einer klaren Kunststoffkappe (14) über dem Bereich (18) härtet und dabei das Aussehen des Substrates (12) bei Betrachtung durch die klare Kunststoffkappe (14) optisch verbessert.

2. Verfahren nach Anspruch 1, bei dem man die Kante (16) bildet, indem man ein im wesentlichen nicht benetzbares Material als Überzug in Form einer Vorlage aufbringt, die an ihrem Umfang an den Bereich (18) angrenzt.

3. Verfahren nach Anspruch 1 oder 2, bei dem das Substrat (12) ein flexibles Folienteil ist.

4. Verfahren nach Anspruch 3, bei dem das flexible Folienteil eine Metallfolie oder metallisierte Kunststoffolie ist.

5. Verfahren nach Anspruch 1 oder 2, bei dem das Substrat (12) ein flexibles Kunststoffteil ist.

6. Verfahren nach einem der vorausgehenden Ansprüche, bei dem die klare Kunststoffkappe (14) von einem flexiblen abriebbeständigen Polyurethan gebildet wird.

7. Verfahren nach einem der vorausgehenden Ansprüche, bei dem der Gießkopf (28) ein programmierter Gelenkkopf ist.

8. Verfahren nach einem der Ansprüche 1 bis 6, bei dem man eine Reihe von Gießköpfen (28) in Verbindung miteinander handhabt, um die fließende Kunststoffzusammensetzung über der Fläche (18) abzulagern.

9. Verfahren nach einem der Ansprüche 1 bis 6, bei dem man den Gießkopf (28) ortsfest hält und das Substrat (12) darunter bewegt.

10. Verfahren nach einem der vorausgehenden Ansprüche, bei dem man die Geschwindigkeit der Relativbewegung zwischen dem Substrat (12) und dem Gießkopf (28) im wesentlichen konstant hält und die fließende Kunststoffzusammensetzung aus dem Gießkopf mit einer variierenden Geschwindigkeit in Abhängigkeit von der Breite des Bereiches (18) abgibt.

11. Verfahren nach einem der Ansprüche 1 bis 9, bei dem man die Geschwindigkeit der Relativbewegung zwischen dem Substrat (12) und dem Gießkopf (28) in Abhängigkeit von der Breite des Bereiches (18) variiert und die fließende Kunststoffzusammensetzung aus dem Gießkopf mit einer im wesentlichen konstanten Geschwindigkeit angibt.

12. Verfahren nach einem der vorausgehenden Ansprüche, bei dem das Substrat eine Schicht von Klebstoffmaterial (22) auf seiner Seite enthält, die der Seite gegenüberliegt, auf welche die fließende Kunststoffzusammensetzung gegossen wird.

13. Verfahren nach einem der Ansprüche 1 bis 6, bei dem man die fließende Kunststoffzusammensetzung auf das Substrat gleichzeitig aus mehreren Gießköpfen (28, 28') gießt.

14. Verfahren nach einem der vorausgehenden Ansprüche, bei dem man eine Relativbewegung



zwischen dem Gießkopf (28) und dem Substrat (12) in einer Richtung allgemein parallel zu der Erstreckungsrichtung des Bereiches (18) vorzieht.

15. Dekorationsgegenstand (10) zum Bedecken eines länglichen Automobilteils (24) mit einem flexiblen Substrat (12),

einem im wesentlichen nicht benetzbaren Material (16), welches eine Vorlage mit geschlossener Kante auf diesem Substrat bildet, wobei die Vorlagenkante einen länglichen Bereich (18) auf dem Substrat umschreibt und einen Randbereich (20) allgemein gleichmäßiger Abmessung, der den länglichen Bereich umgibt, begrenzt und wobei der längliche Bereich (18) sich in der Breite und/oder Form von seinem einen Ende zu seinem anderen Ende verändert,

einer gehärteten klaren Kunststoffkappe (14) in dem länglichen Bereich auf dem Substrat über diesem Substrat, welcher das Aussehen des Substrates durch die klare Kunststoffkappe betrachtet verbessert, und

Einrichtungen (22) zur Befestigung des Gegenstandes (10) auf dem länglichen Automobilteil (24), um für dieses eine Dekorationsabdeckung zu bekommen, wobei der Randbereich (20) um die Kanten des Teils gefaltet ist

16. Gegenstand nach Anspruch 15, bei dem das Substrat (12) ein flexibles Folienteil ist.

17. Gegenstand nach Anspruch 16, bei dem das flexible Folienteil eine Metallfolie oder metallisierte Kunststoffolie ist.

18. Gegenstand nach Anspruch 15, bei dem das Substrat (12) ein flexibles Kunststoffteil ist.

19. Gegenstand nach einem der Ansprüche 15 bis 18, bei dem die klare Kunststoffkappe (14) von einem flexiblen abriebbeständigen Polyurethan gebildet ist.

20. Gegenstand nach einem der Ansprüche 15 bis 19, bei dem die Einrichtung (22) zur Befestigung eine Klebstoffmaterialschiicht auf der Seite des Substrates (12) gegenüber der Seite, auf welche die fließende Kunststoffzusammensetzung gegossen ist, aufweist.

21. Gegenstand nach Anspruch 20, bei dem das Klebstoffmaterial einen druckempfindlichen Kleber umfaßt.

Revendications

1. Procédé pour fabriquer des objets décoratifs (10), comprenant les étapes consistant à :

a) fournir un support (12) comportant un bord utile (16) un motif fermé sur sa surface, lequel bord délimite une zone allongée (18) de largeur variable et/ou de forme variable sur ladite surface,

b) couler une composition de matière plastique fluide à partir d'une tête de coulée (28) sur ledit support (12) à l'intérieur de ladite zone allongée (18) en prévoyant un déplacement relatif entre ladite tête de coulée (28) et ledit support (12) tout en coulant des quantités de ladite composition de matière plastique fluide sur des parties de ladite zone se rapportant à la largeur et/ou la forme de ces parties, ledit support (12) étant maintenu pratiquement à plat d'une manière telle que la composition de matière plastique fluide s'écoule vers le bord utile (16) et forme un ménisque positif, et

c) cuire ladite composition de matière plastique pour former une garniture de plastique transparente (14) sur ladite zone (18) et accentuer optiquement de ce fait l'apparence dudit support (12) comme vu à travers ladite garniture de matière plastique transparente (14).

2. Procédé selon la revendication 1, qui comporte la formation dudit bord (16) par un revêtement d'un matériau essentiellement non mouillable en un motif qui est périphériquement contigu à la zone (18).

3. Procédé selon la revendication 1 ou 2, dans lequel ledit support (12) est un élément de feuille flexible.

4. Procédé selon la revendication 3, dans lequel l'élément de feuille flexible est une feuille métallique ou une feuille de matière plastique métallisée.

5. Procédé selon la revendication 1 ou 2, dans lequel ledit support (12) est un élément de matière plastique flexible.

6. Procédé selon l'une quelconque des revendications précédentes, dans lequel ladite garniture de matière plastique transparente (14) est formée d'un polyuréthane flexible résistant à l'abrasion.

7. Procédé selon l'une quelconque des revendications précédentes, dans lequel ladite tête de



coulée (28) est une tête articulée programmée.

8. Procédé selon l'une quelconque des revendications 1 à 6, qui comporte la manipulation d'une série de têtes de coulée (28) en liaison les unes avec les autres pour déposer ladite composition de matière plastique fluide sur ladite zone (18). 5
9. Procédé selon l'une quelconque des revendications 1 à 6, qui comporte le maintien de la tête de coulée (28) fixe et le déplacement du support (12) situé au-dessous de celle-ci. 10
10. Procédé selon l'une quelconque des revendications précédentes, qui comporte le maintien de la vitesse du déplacement relatif entre ledit support (12) et ladite tête de coulée (28) pratiquement constante et la distribution de la composition de matière plastique fluide à partir de la tête de coulée à une vitesse variable fonction de la largeur de ladite région (18). 15
11. Procédé selon l'une quelconque des revendications 1 à 9, qui comporte la variation de la vitesse du déplacement relatif entre ledit support (12) et ladite tête de coulée (28) fonction de la largeur de ladite région (18) et la distribution de la composition de matière plastique fluide à partir de la tête de coulée à une vitesse pratiquement constante. 20
12. Procédé selon l'une quelconque des revendications précédentes, dans lequel ledit support comporte une couche de matériau adhésif (22) sur son côté opposé au côté sur lequel ladite composition de matière plastique fluide est coulée. 25
13. Procédé selon l'une quelconque des revendications 1 à 6, qui comporte simultanément la coulée de ladite composition de matière plastique fluide sur ledit support à partir d'une pluralité de têtes de coulée (28, 28'). 30
14. Procédé selon l'une quelconque des revendications précédentes, qui comporte le déplacement relatif entre la tête de coulée (28) et ledit support (12) dans un sens généralement parallèle au sens d'allongement de ladite zone (18). 35
15. Objet décoratif (1a) pour recouvrir un panneau automobile allongé (24) comprenant :
un support flexible (12),
un matériau essentiellement non mouillable (16) formant un motif à bord fermé sur ledit support, ledit motif à bord délimitant une zone allongée (18) sur ledit support et définissant 40

une zone limite (20) de dimension généralement uniforme entourant ladite zone allongée, ladite zone allongée (18) changeant de largeur et/ou de forme à partir d'une de ses extrémités à l'autre extrémité,

une garniture de matière plastique transparente cuite (14) à l'intérieur de ladite zone allongée au-dessus dudit support qui accentue l'apparence dudit support comme vu à travers la garniture de matière plastique transparente, et

un moyen (22) pour monter l'objet (10) sur ledit panneau automobile allongé (24) pour procurer un revêtement décoratif pour celui-ci, avec ladite zone limite (20) étant enroulée autour des rebords du panneau.

16. Objet selon la revendication 15, dans lequel ledit support (12) est un élément de feuille flexible. 20
17. Objet selon la revendication 16, dans lequel ledit élément de feuille flexible est une feuille métallique ou une feuille de matière plastique métallisée.
18. Objet selon la revendication 15, dans lequel ledit support (12) est un élément de matière plastique flexible.
19. Objet selon l'une quelconque des revendications 15 à 18, dans lequel ladite garniture de matière plastique transparente (14) est formée d'un polyuréthane flexible résistant à l'abrasion.
20. Objet selon l'une quelconque des revendications 15 à 19, dans lequel ledit moyen (22) pour le montage comporte une couche de matière adhésive sur le côté dudit substrat (12) opposé au côté sur lequel la composition de matière plastique fluide est coulée.
21. Objet selon la revendication 20, dans lequel ledit matériau adhésif comprend un auto-adhésif. 45

